DOCUMENT RESUME

ED 081 130 EC 052 414

TITLE Curriculum Guide: Elementary Gifted Education. Project Gifted.
INSTITUTION Cranston School Dept., R.I.
SPONS AGENCY Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE Sep 71
NOTE 169p.; Pilot Edition

EDRS PRICE MF-$0.65 HC-$6.58
DESCRIPTORS *Class Activities; *Curriculum Guides; *Exceptional Child Education; *Gifted; High Achievers; Language Arts; Mathematics; Social Studies
IDENTIFIERS Cranston (Rhode Island); Elementary Secondary Education Act Title III; ESEA Title III

ABSTRACT

The pilot edition of the curriculum guide for elementary gifted education of the Cranston, Rhode Island, school department offers a resource framework for the presentation of academic material while providing for individual instruction and initiative. The curriculum funded under Title III of the Elementary and Secondary Education Act offers activities in language arts, social studies, science, and mathematics which stress the development of skills while allowing students to pursue individual interests. The material is presented in terms of objectives, activities, and evaluations. Examples of language arts activities suggested are the composing of titles for untitled newspaper articles and the discussion and use of proper grammatical forms. Social studies activities include a study of the Huguenots and Narragansett planters, and the construction of a Sahara nomad's home. The science curriculum is said to be based on the American Association for the Advancement of Science Program and to stress the ability to use the scientific method of problem solving and the development of scientific skills and understandings by activities such as the construction of an electrical circuit. Activities for the mathematics curriculum include the application of mathematics to the hypothetical construction of a home and to a trip to Niagara Falls. A final chapter summarizes characteristics of gifted children. (DB)

ED 081130

U S DEPARTMENT OF HEALTH.
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

EC

CURRICULUM GUIDE

ELEMENTARY GIFTED EDUCATION

PROJECT
GIFTED
C
W
EP

CRANSTON SCHOOL DEPARTMENT
CRANSTON, RHODE ISLAND

Pilot Edition

Title III, E.S.E.A.

September, 1971

EC052 414

FILMED FROM BEST AVAILABLE COPY

INTRODUCTION TO CURRICULUM

This curriculum has been developed under the E.S.E.A. Title III grant for Project Gifted by a curriculum development team from the Cranston School Department. The curriculum as published represents the first field test edition and is not to be considered a final product. In the next two academic years the curriculum will be implemented in the Cranston Project Gifted Class and will undoubtedly undergo considerable modification. It is requested that if this curriculum is utilized either in part or in whole, outside of Project Gifted that feedback be given to the development committee concerning both its strong and weak points. Only by direct experience gained within the classroom can this curriculum be refined into a truly functional and valuable learning resource.

PURPOSE

The purpose of the curriculum is not to lock the teacher into a rigid sequence of activities but rather to provide the teacher with a resource framework for presenting academic material in an interesting manner with wide latitude for individual instruction and initiative. The individual teacher using her own special skills and interests and her understanding of her own students should feel free to adapt this curriculum to her particular needs.

PHILOSOPHY

The philosophy of this curriculum is to provide in each of the four content areas, activities and resources which will allow the student to develop his skills in these areas while following his own interests. As much as possible repitition and drill have been eliminated, practice coming through use of

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

a skill in an ongoing activity. The curriculum is designed to go beyond factual knowledge emphasizing Bloom's Analysis, Synthesis and Evaluation levels of cognition. Most activities are open ended allowing for in depth study but not necessarily fostering undue vertical acceleration.

It is the hope of the Curriculum Development Committee that this work will be the seed for a truly useful resource for Academically Gifted Students.

Superintendent of Schools
Dr. Joseph J. Picano, Jr.
William A. Briggs Building
845 Park Avenue
Cranston, Rhode Island 02910

Assistant Superintendent
Mr. Joseph A. Murray, Jr.

Assistant Superintendent
Mr. Robert S. Fresher

Director of Pupil Personnel Services
Mrs. Louise M. O'Mara

Director of Grant Programs
Mr. Carlo A. Gamba

Director of Project Gifted
Mr. Julius J. Breit

Project Gifted Consultant
Dr. Joseph S. Renzulli

Curriculum Committee
Science
Mr. Ernest E. Slocum, Jr.
Cranston High School East

Language Arts
Mr. Charles Abosamra
Hugh B. Bain Junior High School

Mathematics
Mrs. Marie A. Benjamin
West View Elementary School

Social Studies
Mrs. Alma Y. Brownsword
West View Elementary School

Coordinator
Mr. John W. Blackburn, Psychologist

Teacher Consultant
Mrs. Sandra Jennings, Teacher, Project Gifted

Cranston School Committee
Mr. Merrill G. Cornell (Chairman)

Mr. Richard I. Barber
Mrs. Carol R. Brooklyn
Mr. Rodney M. Brusini
Mr. Edward D. DiPrete
Mr. Aram Garabedian
Mr. A. William Olsen
Mr. Donald R. Rasmussen
Mr. C. Robert Sala

TABLE OF CONTENTS

Chapter	Area	Page
I	Language Arts	1
II	Social Studies	48
III	Science	96
IV	Mathematics	126
V	Learning Characteristics of Gifted Children	163

CHAPTER I

LANGUAGE ARTS

COMPOSITION SKILLS

I. Objective: The student will be able to define the term "Communication"

Activities: Class discussion of the history of communication from the development of language in prehistorical times. Why was language necessary? What form would the first communications have taken? Have class attempt to work out a form of communication which is effective in transmitting their basic needs without resorting to a known language? From the results of this exercise which will probably progress from gesture, to vocalization, to some form of graphic presentation, develop the reasons behind and purpose for each.

II. Development of ideas for writing.

Objective: The student will be able to utilize his five senses in writing about a given topic.

Activities:

a) Conduct a general discussion concerning the five senses and the means by which the impressions from all the senses can enhance writing.

b) Give a series of specific situations and have the students describe them using first all and then only one of their senses, for example: the smell of spring, the sounds of Christmas.

c) Have the students discuss a specific situation in which they might find themselve and combine a list of all the stimuli they can recall regarding, their five senses. Once the lists are compiled, relate the senses with each other. Show also how the impressions from a number of lists may be compiled to develop a more specific and meaningful description.

d) Have the students write a short composition on a specific time using basically sensory impressions. Ex. Sunday morning, 2:30 P.M. Fridays etc.

III. Word Usage

Objective: The student will be able to utilize specific vocabulary to foster clarity and stronger imagery.

Activities: a) Discuss the difference between generic and specific words (ex. color- purple; person- teacher) and how the use of specific words lends clarity to written expression.

b) Present lists of generic words and have the class brainstorm for specifics.

c) Have the students select short passages from appropriate library books and attempt to improve the style in terms of clarity by substituting specific words for generic and then have the class evaluate the results as to which was the most effective.

IV. The combination of single words and ideas into phrases or groups of words.

Objective: The student will be able to recognize, define and construct the following: Phrase, noun phrase, verb phrase, noun & modifier, verb and modifier

Activities:

1. Conduct a general class discussion of the above forms of phrases.
2. Give the student a list of simple phrases to be classified and elaborated.
3. Select a passage from a well known story and strip it of all modifiers and elaboration, present to the class and have the students fill in the desired elaboration. Have the students evaluate their results both in terms of the original and the stripped version of the story. Have the class combine the best of both to create the perfect paragraph.

V. The use of sentences to express complete ideas.

Objective: The student will understand and be able to state the definition of a sentence and its basic parts.

Activities:

1. General class discussion.
2. Have the students rearrange jumbled sentences to make the most effective expression of ideas.

VI. The use of varying sentence arrangements to create interest and diversity.

Objective: In his written work the student will use varying sentence arrangements.

Activities:

1. Explain and discuss using plenty of examples.
2. Give students a series of compound complex sentences and have them add interest by varying the structure. Read and discuss the most effective order for each sentence.
3. Select a passage from an appropriate story and rearrange the text into a standard Subject-Verb-Predicate order, using only simple or compound sentences. Have the students rearrange the order and sentence form. Compare for effectiveness with the original. Can the students improve upon the original. Sports pages are a good place to look for material they can practice on.

VII. Introduction of similes and metaphors leading to colorful imagery and specific details.

Objective: The student will be able to define and use both simile and metaphor.

Activities:

1. General introduction and discussion.
2. Give the class a list of nouns and adjectives and in class discussion have them brainstorm for effective and fun similes and metaphors to make the listed words more meaningful and interesting.

3. Have the class read a short story looking for simile and metaphor.
4. Have the class select and re-write a newspaper story adding simile and metaphor as well as the above mentioned structures to make a more effective presentation.
5. Have the students reflect their understanding of the unit to date by writing a short theme on a common object, for example: the paintbrush ✓ or the television.

VIII. The discussion of Parallel Construction - the expression of similar thoughts in similar construction.

Objective: The student will be able to use the various forms of parallel construction.

Activities:

1. Discuss and ask the class for examples of the following forms of parallel construction.
   a) Combination of like words
      snow & ice
      wind & rain
   b) Use of simile phrase
      laughing bags - giggling girls
      over the hill - under the bridge
   c) Combination of words and phrase modifier.
      The snow in the field and the ice on the pond.
   d) One word with two modifing phrases.
      The rabbit leaped over the puddle and into the bushes.

IX. Paragraph development:

Objective: The student will be able to state and follow the general rules of paragraph development.

a) Unity - key concept
b) Sentence concerned with the same subject yet each adds more information.

c) Same subject in entire paragraph - yet use of different words nouns or pronouns to identify the subject. Use syncnymous subjects throughtout the paragraph to ensure maintenance of the topic.

d) Proper order of ideas
Chronological order - logical time relationship-sequential occurrence.

Activities:

1. Thorough class discussion
2. Mimeograph paragraphs in which the sentence order has been altered and have the class rearrange into an effective order. Discuss possible alternatives with the group.
3. Give the class a list of nouns and have a contest to see who can find the most synonyms
4. Then introduce Thesaurus.
5. Have the class compose a short theme, three paragraphs, describing an event emphasizing correct paragraphing.

Point of view:

Objective: The student will be able to define and state implications of point of view.

Activities:

1. Discuss 1st and 3rd person approaches with the class.
2. Approach through oral story telling. Have the students tell a variety of stories from 1st and 3rd person and analyze their effectiveness in different situations.
3. Have the class read passages from Moby Dick and attempt to re-write in the 3rd person. Which is more effective in making Melvilles point?
4. Have the students try to re-write a newspaper article in the first person and analyze for effectiveness.

XI. Implimentation of previous knowledge to write a paragraph.

Activities:

1. Tie up material to date.
2. Have students: Choose topic, choose synonymous subjects, decide on number of sentences, determine point of view, write paragraph.

XII. The individual paragraph as it relates to the entire composition.

Objective: The student will be able to state the role of each paragraph in the development of an entire theme.

Activities:

1. Discuss the role of each paragraph in developing a theme and relate to the parts of the individual paragraph.
    a) topic sentence
    b) substantive sentence
    c) clincher sentences
2. Discuss the need for transitional sentences and concluding sentences.
    a) smoothness of writing
    b) necessary for unity and coherence
    c) elimination of dangling ideas
3. Have class develop a three paragraph theme stressing smooth transition and coherence.

XIII The scheme of the entire composition

Objective: The student will be able to state, recognize and use the five basic parts of a story.

Activities:

1. Discuss
    a) introduction
    b) rising action
    c) climax
    d) filling action
    e) conclusion
2. Read a story with the class and have them decide

among themselves what constitutes the various parts of the story.

3. Have the class write a 5 paragraph story emphasizing the above.
4. In class discussion summarize and attempt to elicit the concept that the entire composition differs from the paragraph only as it is larger.

XIV. Discussion of literary terms - methods to use to write vivid and colorful sentences.

Objective: The student will be able to define and construct examples of the following literary terms; personification, cliche , idioms, hyperbole.

Activities:

1. Illustrate the various literary terms through examples occuring by chance or choice in the class compositions available at the time.

XV. STYLE - MOOD - THEME

Objective: The student will be able to define style, mood and theme and state their importance in a composition.

Activities:

1. Discuss various authors intents and the style which may best put across this intent. Do the same with mood. Select library books or articles to illustrate the point and then have students do the same.

XVI. Characterization - methods of illustrating a character

Objective: The student will be able to state and use the various means of characterization.

Activities:

1. Discuss with class:
   a) Description
      physical appearance
      Style of dress
   b) actions
   c) reaction to others
   d) other reaction to character

e) the characters thought

2. A great deal could be done here relative to a unit combining social studies and English such as historical biographical sketches.
3. Hold a discussion on "How I know my friends." Ask students to describe their friends, go back to the five senses and possibly add the sixth.
4. Bring in the concept of the personal or the self we portray by choice to others to mask our true self. Bring in examples such as the gruff teacher with the heart of gold etc.

XVII. Quotations:

Objective: The student will be able to use quotations.

Activities:

a) Always use quotation marks to enclose a direct quotation, a person's exact words. (If a person's words are not quoted exactly NO quotation marks are needed. Such a use is an indirect quotation.)

b) A direct quote begins with a capital letter.

ex. Harold said, "The icing isn't thick enough."

c) When a quoted sentence is divided into two parts by an interrupting expression such as he said or mother asked, the second part begins with a small letter.

ex. "The time has come," insisted the speaker, "to improve our educational program."

(A divided quotation is called a broken quotation. Notice quotation marks appear before and after the interrupting expression.)

d) A direct quotation is set off from the rest of the sentence by commas. If a quote comes at the beginning of a sentence, a comma follows it. If a quote is at the end of a sentence, the comma precedes it, If a quote is interrupted a comma follows the first and precedes the second part.

ex. "Science is more interesting than English," said my history teacher who cannot spell.

I asked, "Who is your history teacher?"

"It was Mr. Murphy," said Bob, "but now we have Mr. Notte."

e) A period or comma following a quotation should be placed inside the closing quotation marks.

ex. "It's time to go," said the guide.

The man replied, "I'm ready."

f) A question mark or an exclamation point should be placed inside the closing quotation marks if the quotation is a question or an exclamation. Otherwise it should be placed outside.

ex. "How far have we come?" asked the exhausted man. Who said, Give me liberty or give me death?"

"Jump!" screamed the woman.

"No!" yelled the woman.

I couldn't believe it when he said, "No, Thank you!"

Note: In a broken quotation, no comma is needed if an end mark is used instead.

g) When writing a dialogue (two or more persons have a conversation) begin a new paragraph every time the speaker changes.

h) When a quotation consists of several sentences, put quotation marks only at the beginning and end of the whole quotation, not around each sentence in the quotation.

I) Use single quotation marks to enclose a quotation within a quotation.

ex: "Let's sing 'Home on the Range'," suggested Lefty.

"Did Mr. Numan really say, 'It's all right to use your books during the test'?" asked Sally.

XVIII. Letter writing - the student herein brings all knowledge of composition writing to functional use.

CREATIVE WRITING-NEWS WRITING

Objecitve: The student will be able to state the definition of the term "language."

Activities:

1. Class discussion.
   a) Write "language" on board
      1. What is it? Words
   b) Pretend its 15,000 years ago. You meet another Prehistoric man. How do you tell him that you want to be friends?
      1. Make nonsensical sounds in response to pupil, in a tone as if telling him emphatically to do something. (words with meaning to only one person)
      2. Language has to be understood in order to achieve purpose.
   c) What is the purpose of language? Communicate.
   d) Why communicate? To express ideas.
   e) What we're going to do is look at language, try to discover why and how it was developed and how we can make better use of it.

Evaluation: The student will define the term "language", stating what it is, what its purpose is and why we need it.

Objective: Given several paragraphs, the student will be able to state correctly the Main Idea of each.

Activities:

1. Class discussion. Language is an expression of ideas. A book has a Main Idea, that is what it is about. Each chapter, each paragraph has a Main Idea. Each sentence has a Main Idea.
   a) In reading, we must be "super snoopers" and ask Who? What? How? and Why? These are the questions behind the meaning of every book we read and

every movie we see as well as behind everything we say. There is a reason why something was said- find it and you've found the Main Idea.

2. Give out sheet "Fish Watching." Read. Find out what each paragraph is about. That is, the Main Idea of each. Underline.

   a) Discuss.

3. Give student a newspaper article. Have him cut off the Title and give to another student. The other student must read the article to find the Main Idea and write a title that he thinks is suitable to the article. Compare with original title. Paste article, original title and student's title on piece of paper.

References and Materials:
Local Newspapers
Paste
Scissors
Construction Paper - 5"x8"

4. Bring in other texts-reading, science, social studies. Do exercises in finding the Main Idea of certain paragraphs.

5. Give out mimeo sheet with newspaper articles, minus titles. Have student compose a suitable title.

Evaluation: The student will be given five (5) paragraphs to read. He will state correctly the Main Idea of each.

FISH WATCHING

In 1961, an organization, the American Littoral Society, was formed by diver-naturalists who wanted to introduce people to the wonderful underwater world.

The A.L.S. is dedicated to the conservation of wildlife, plants, and water. It has been very successful. One of its efforts is the building and protection of "fish cities". Fish gather where there is shelter and fish watchers try to provide them with artificial reefs of car bodies, street cars, and rubble from demolished buildings.

For many people, fish watching is a cheap, delightful family hobby. A snorkle, face mask, and flippers are all that are needed to explore nearby streams, lakes, or coasts.

Ideally, the watchers study fish in their natural habitat, then set up a home aquarium duplicating it as much as possible. They also report important findings to the Underwater Naturalists, thus adding information on marine biology.

Fish watchers also have the thrill of adventure into the unexplored. Experts say that within five years men will be living in camps 600 feet below the surface and will be using the wealth of the ocean. Fish watchers want to explore this world before all this happens.

Directions: Read the three articles copied from a newspaper. Only the titles have been left out. Look for the Main Idea. Write a title in the space provided that you think states the Main Idea of each article.

____

Dwight D. Eisenhower's progress recuperating from his seventh heart attack reached the point where doctors have stopped issuing daily bulletins.

For the second straight day doctors at Walter Reed Army Hospital said Tuesday "his progress continues to be favorable."

They added that there would be no further word on the 77 year-old general and former president until there is a significant change in his condition.

His latest attack was August 16, the fourth in a series that started April 29.

____

North Attleboro - The Water Department is seeking the cause of a chemical taste in the town's water supply, noted in various sections of the town.

Water Superintendent Melvin White has reported receiving numerous telephone complaints since last Wednesday.

Bruce J. Bliss, chairman of the Water Commission, has stated that the water is not polluted and does not represent a health hazard. The trouble is believed to be centered in a poor circulation condition in a 16-inch main running in Broad Street from the Whiting Street pumping station.

Providence, R.I. (AP) - The Providence Journal-Bulletin, the largest newspaper in Rhode Island, will face a strike threat if 300 members of the American Newspaper Guild vote Thursday to authorize the walkout.

Leaders of Local 41 of the Guild asked for the authorization after more than nine months of negotiations failed to produce a new contract for the editorial and advertising employees. The old contract expired Dec. 15.

Local president Allan Saftel said that if a strike is authorized, it will not necessarily be called.

In a letter to guild members he said the major unsettled issues are related to wage differentials and union coverage of all employees.

Objective: Given a newspaper article, the student will be able to find and state the Main Idea and Minor Details.

Activities:

1. Cut off titles of articles in a newpaper. Have the student read the article and find the Main Idea. Have him compose a suitable title for the article.
2. Have student list the minor details within the article-those details which help to tell the story.
3. Class Discussion.

Evaluation: Given a newspaper article, that has no title evident, the student will compose a suitable title. .. He will also list the supporting facts or minor details which help to tell the Main Idea.

Objective: Given a Main Idea, the student will be able to compose a paragraph concerning that idea.

Activities:

1. Show slides of art works.

References and Materials:

Slide projector

Slides: Winslow Homer's - Boys in a Boat
Storm Warning

Grunewald: Crucifixion
Bernini: David
Michelangelo: Pieta

a) Discuss Main Idea of each.

b) Describe anything else that the artist used to portray this main idea (minor details)

1. Color
2. Line

2. Think of an idea (main). Draw a picture of it. Add as many details as are necessary to portray this Main Idea.

a) Discuss.

b) Write a paragraph about this idea.

3. Discussion of Who, What, Where, Why and How. We use these to find the Main Idea. We use these to describe a Main Idea.

4. Fill in these paragraphs. Find the Main Idea. The other sentences are needed to make the Main Idea complete.

A. One of my favorite television shows is ________. I like it because______. It also__________. Best of all, _____.

B. An important subject we study in school is_____. One reason for its importance is the fact that_____. It is also important because____. The main reason for its importance, however, is ______.

C. One of the most interesting animals in the world is______. What interests me most about it is the fact that it______. Another interesting thing about the (name) is _____. Its most unusual habit is______.

Evaluation: The student will be given 10 Main Ideas (topic sentences) to choose from. He must pick three (3) and write a concise paragraph about each.

Objective: Given sentences, the student will be able to state the Main Idea of each.

Activities: Class Discussion. Give examples in class.

a) Struggling to find his way through the dark house, Jim managed to get the candles out.

1. Discuss what the Main Idea of each sentence is.
2. Give out sheets with sentences, have the student underline the Main Idea of each.

Evaluation: Given ten(10) sentences, the student will identify the Main Idea of each.

Objective: Given an object, real or non-sensical image, the student will be able to write a paragraph describing the object in minute detail.

Activities:

1. Pre-test.
   a) Have the student write a paragraph concerning a particular picture.
   b) Have the student write a paragraph about a symbol that has no obvious relevance to his every day environment.
2. Discuss "describing words."
3. Have practices concerning descriptive language, both at board and written assignments, using pictures found in various texts or possible prints of art works.
4. Have student pick some object in the room and describe it in detail, without actually naming the object. Have him give this description to

another student who must then use it to draw whatever image is portrayed to him in the description. See if the illustration turns out to be the same as the student was describing.

Evaluation: The student will, when given a specific picture or object, describe such in minute detail- following the rules of good descriptive writing.

Objective: Given a topic, the student will be able to write a descriptive paragraph concerning that topic.

Activities:

1. Write on board:
    a) A sunset on a lake
    b) A hungry kitten drinking milk
    c) Trying to waterski for the first time
    d) A boy on a runaway horse.
2. Discuss painting a picture with words.
3. Pick one of the topics and write a descriptive paragraph. Read in class.

Evaluation: Given a topic, the student will write a descriptive paragraph concerning that topic.

Objective: Given a descriptive phrase, the student will be able to create an original story.

Activities:

1. Read and complete the following story: The night howled as if the walls of the old two-story mansion were actually calling to someone. The shutters banged, were silent as the gray fog collected and rose to the porch level of the broken-down top step, and then began to bang painfully again. A bluish-green dim ray of light seemed to be escaping from behind a cracked board in the sealed attic of the house when suddenly...
2. Write phrases on board. Have student create an original story using the phrases.

a) low-muffled sound
b) strange,unusual shadows
c) huge, irregular footprints
d) dogs snarling viciously

3. Have student suggest phrase to be used. Then have him create an original story.

Evaluation: Given mood-related descriptive phrases, the student will create an original story.

Objective: The student will be able to define the term "news"

Activities:

1. Discussion.
   a) To whom is it news when you get a new bike? (family & friends)
   b) To whom is it news when a President's son gets a new bike? (Many people thru/out the particular country)
      1. What is the difference? (Citizens of a country are interested in their president and his family.)
   c) Are the same people and events "news" to everyone? (No. Information becomes news because of the kind of interest it holds for us, and our involvement in the situation.)
   d) Once you have heard about what is going on, is the same information news when you hear it again? (No.)
   e) How would you define news? (Up to date information about what happened or is scheduled to happen)
   f) Give some examples of what you believe would NOT be news.

Evaluation: The student will define the term "news."

Objective: Read the following accounts:

a) Dog Saves Family: Home Destoyred.
"Pickle's barking saved me, my wife and my two sons," Frank Adams claimed last night after

watching flames gut out his 85-year-old frame residence, 298 Forest Way.

Men and equipment from two fire engines fought the midnight blaze for two hours. Damage is estimated at $10,000, by Adams.

Battalion Chief Ray Nelson said the origin is not yet known. "We were too busy keeping the flames under control," he explained.

The Adams family, asleep in separate upstairs rooms, woke when they heard their pet barking. Pickle, a 9-year-old dachshund, sleeps in a box in the kitchen.

b) The House That Is No More

We used to live on Forest Avenue just two doors from the corner, Our house was a very old house, but I liked it. It was the kind of house that had narrow stairs leading to the attic, and fancy wooden trimmings all around the roof, and a long fireplace with a wooden mantel.

We were all asleep when the fire that destroyed our home started. That is, all of us except Pickle. Pickle is our dog. I guess I don't have to tell you what shape he is. He sleeps in a box in the kitchen.

It was dark when I woke up, hearing him barking. Then I saw flashes of light and Daddy was yelling, "Fire! Fire!"

1. What are both accounts about?(Destruction of a home)
2. Which account immediately tells its readers exactly what happened and where and when and to whom?
3. Which account gives an answer to why the fire happened? (a)
4. Which one makes you feel like your reading a story or narrative? Give a sentence that supports your answer.

5. What impression does the other account give you? (A reportorial style that deals with facts, that describes only exactly what someone on the scene could easily have observed or heard, or verified for himself.)

Evaluation: The student will state two ways in which news writing differs from other types of writing.

Objective: The student will be able to state where in a news story the answers to the 5-W questions should be given.

Activities:

1. Using the same two accounts:
   a) Read the last paragraph. If you did not have this paragraph, would account (a) still give you a clear explanation of what happened? (yes) would account (b)(No.) Explain your answer.
   b) Take away the third paragraph of account (a), as well as the last one. Without these paragraphs, do you still feel you know the important facts about the fire? (yes)
   c) Could you take away either of the 2 paragraphs that are left and still feel informed? Explain your answer. (Yes, you could take away the 2nd paragraph.)
2. Where in a news article should the answers to the 5-W questions be given? In the first paragraph.

Evaluation: The student will state where the answers to the 5-W questions should be given in a news story.

Objective: Given a news story, the student will be able to state the answers to the 5-W questions.

Activities: Read the accounts (found on the following page)

1. In the examples, which 5-W question is answered by each of the following items of information.

a broken arm   Poor timing   school playground
Wayne Agaard   Friday afternoon

a) Wayne Agaard Breaks Arm

Sixth-grader Wayne Agaard suffered a broken arm when attempting to jump from a school swing last Friday afternoon. "I just didn't time it right," Wayne said. Dr. Hugh Dryer reports Wayne will wear a cast 6 weeks. Wayne broke his left arm in a skiing accident last winter.

b) Other Arm Broken In School Mishap

Wayne found out that a broken arm isn't any fun. He should know by now. He broke his other arm last year while skiing.

This year's accident took place at school last Friday Apparently Wayne didn't time his jump for the swing just right.

No one saw him fall but he must have been thrown off balance.

c) Boy Breaks Arm-timing Blamed

Not timing his jump from a school swing correctly was the reason Wayne Agaard gave for the broken arm he received in an accident Friday afternoon "I think I was thrown off balance by trying to jump too soon," he said.

Wayne is a member of the Sports Club and pitches for its Little League Team.

Objective: The student will be able to distinguish and identify statements of fact from statements of opinion.

Activities:

1. Using the same accounts (a,b & c) Discuss:
   a) Quote the sentences that explain why the accident happened.
   b) Which of the sentences answering "why" state a fact and which merely gives the reporter's opinion? (a & c-fact - b - opinion)
   c) How did the person who wrote the factual information show you that he was giving Wayne's opinion and not his own ? (By telling what

Wayne said in a direct and indirect quotation.

2. Which of these sentences are expressions of opinions?
   a) Boys should never be allowed to have guns.
   b) Plastic hair rollers are better than nylon ones.
   c) Storm warnings were issued along the coast today.
   d) Orphans lead difficult lives.
   e) We have too many kinds of insurances.
3. Which of these sentences are statements of fact?
   a) Jelly beans taste better than caramels.
   b) A new series of highway signs informs motorists that jelly beans taste better than caramels.
   c) The meeting started ½ hour late.
   d) Many people left early because they didn't want to wait.
   e) The best show on TV is Mod Squad.
4. Change each statement of opinion into a statement of fact.

   Ex. Some people believe boys should never be allowed to have guns....

   Mrs. Jennings said, "Boys should never be allowed to have guns."
5. Give a statement of fact and a sentence of opinion concerning each of the following.
   a) Trees in the fall
   b) Lunches at school
   c) Baseball games
   d) School libraries
   e) Haircuts

Evaluation: Given a combination of sentences of fact and sentences of opinion, the student will correctly identify each.

Objective: Given the basic facts, the student will be able to write a news story.

Activities:

1. Write a news story from the following information. Supply any further details that you wish.
   a) Myra Hirsh, 12 years old, likes horses better

than anything in the world. She entered a cereal contest to name a colt. The grand prize was the colt itself. On Saturday, Myra was thrilled to receive word that the entry she submitted won the grand prize. All she could say was, "oh'."

2. Remember news writing answers the 5-W questions as soon as possible. It then supplies the details concerning what the reporter saw or heard, not what he thinks.

3. Have the student choose one of his favorite stories and write it as a news article under an interesting, concise headline.

4. Take an event that happened in history. Write a news story concerning that event.

Example: News of Yesterday
Boston Gazette December 16, 1673

Indians Dump Tea
by Judy Conley

Boston--Yesterday at dusk a group of Indians boarded a British East India ship anchored in the Boston harbor and emptied three hundred and forty-two chests of tea into the sea.

The savagery occured following the massive town meeting at the Old South Church, where the colonists met yesterday to make a last plea to the British Authorities. It is alleged that the Indians acted upon a signal given by Samuel Adams when the colonists' plea for the ship to leave the harbor without unloading was turned down. The onlookers were not able to identify any of the Indians, however, it is reported that they spoke English.

5. Select a committee of pupils to prepare a bulletin board display using the news headlines and article which the pupils have written.

6. Form a class newspaper.

Evaluation: Given the basic facts, the student will write a news story concerning those facts.

Objective: Given sentences, the student will be able to identify the nouns present in each.

Activities:

1. Class discussion. Give definition of a noun: Person, Place, thing, or idea.
2. Write sentences on board. Pick pupils to locate each noun present.
3. Given one minute, list as many nouns as you can that are in the room.

   Materials:

   Paper divided into columns
   Pencil
4. Give out written sheet with sentences. Have each student underline all nouns present.
5. Turn to appropriate pages in Social Studies text. Have student list nouns (establish vocabulary).

Evaluation: Given ten (10) sentences, the student will state the nouns present in each.

Objective: Given a list of nouns, the student will be able to classify correctly each one under the headings of Common, Proper, Singular, Plural, Abstract, Concrete, Collective.

Activities:

1. Discuss each in groups of two. Give examples of each.
   a) common and proper
   b) singular and plural
   c) abstract and concrete
   d) collective
2. Exercise in identifying each group, then put groups together and identify.
3. Give a list of nouns, have student classify each.

Evaluation: Given a list of nouns, the student will correctly classify each one under the headings of; Common, proper, Singular, Plural, Abstract, Concrete, Collective.

Objective: Given sentences, the student will be able to identify the verbs present in each.

Activities:

1. In an ordering tone, name one student and a noun;
   a) "Steve-desk"
      1. You are saying words that are understood, so why arent't you communicating?
         a) Steve doesn't know what to do.
      2. Need the "do" word or action word in order to express your idea.
         a) Introduce term "verb"
2. Class Discussion
   a) Why verb is important
   b) Function of verb
3. Write sentences on board. Have students underline the verb present.
4. Have students compose sentences and state the verb.
5. Give sheet with written sentences. Have student identify and underline the verb present in each sentence.

Evaluation: Given fifteen (15) sentences, the student will identify the verb present in each.

Objective: The student will be able to identify Linking Verbs within a sentence.

Activities:

1. Discussion: Verbs that show no action, to-be verbs, or verbs describing the senses, are used to join subject and predicate (like action verbs) are called linking verbs.
2. Give sentences. Have student identify the the linking verb.
3. Give sentences that have action verbs and sentences that have linking verbs. Have student identify each type correctly.

Evaluation: Given ten (10) sentences, the student will correctly identify and underline the ones that contain a linking verb.

Objective: The student will be able to correctly identify the subject of a sentence.

Activities:

1. Discussion: The subject of a sentence tells what the sentence is about. It is made up of a noun.
2. Identify the subject in the following sentences:
   a) Schools closed at noon today.
   b) Thousands of people watched the game.
   c) The trees swayed in the wind.

Evaluation: Given ten (10) sentences, the student will correctly identify the subject present in each.

Objective: The student will be able to correctly identify the predicate of a sentence.

Activities:

1. Discussion: What is a predicate? It tells about the subject. It contains a verb.
2. Given sentences find the predicate, underline it.
   Ex. Thomas A. Edison was an inventor.
3. Write sentences on board. Have student underline the subject once and the predicate twice.
   Ex. My new skates are very sharp.

Evaluation: Given ten (10) sentences, the student will correctly identify the predicate contained in each.

Objective: The student will be able to define the term "pronoun," and identify them in sentences.

Activities: Discussion: A pronoun is a word that is used in place of a noun. It is a substitute for a noun. Listen to these sentences, which one seems more sensible?

1. Miss Hanson asked Jerry for Jerry's address, so Jerry gave Jerry's address to Miss Hanson.
2. Miss Hanson asked Jerry for his address, so he gave it to her.

Words in the second sentence are substitutes for words in the first sentence. List the substitutes. These

are called pronouns.
Given sentences on board. Have student substitute pronouns for the nouns.

Evaluation: Given sentences, the student will correctly identify the pronouns contained in each. He will state the definition of the term "pronoun."

Objective: The student will be able to state the personal pronouns in the Nominative Case in given sentences.

Activities:

1. Discussion: Introduce the term "Case." (The way a word is used)
2. Introduce "Nominative" or in this case the personal pronouns used as subjects of a sentence.
3. When you refer to yourself as the subject of a sentence you use what pronoun? (I), (We)
When you tell Jim to sit over in a certain chair you would say, "You sit over in that chair."
The words you use to refer to yourself, to others, and to objects are called Personal Pronouns. Write a list of personal pronouns on the board.
4. Write sentences on board. Have student replace the noun with the appropriate personal pronoun. Be certain to have them replace only the noun in the subject.
5. Have the student write sentences, using a personal pronoun as the subject.
6. Discussion: When you use a personal pronoun as a subject, you are using it in the Nominative Case.
7. Write sentences on board that have pronouns in the Nominative Case as well as in the objective and possessive. Have student identify the personal pronoun used in the Nominative Case.

Evaluation: Given sentences, the student will state correctly the personal pronouns used in the Nominative Case in the sentences.

Objective: The student will be able to identify and state the personal pronouns used in the objective case in sentences given.

Activities:

1. Discussion Introduce the term Object of a Verb and define its meaning. A noun or pronoun that follows in action verb is called the Object of a verb. An Object form of pronoun includes "me, you, him,her it, us, them.

2. Write sentences on the board. Have the student draw a circle around each pronoun that is the object of an action verb.

Ex. The fireman saved Jody and her.
The police questioned him for half an hour.

3. Discussion. When the personal pronoun is used as an object of a verb it is said to be used in the Objective Case.

4. Give the student sentences. Have him identify the personal pronouns that are used in the Objective Case in those sentences. Discuss in class.

5. Give the student sentences that use pronouns in the Nominative and the Objective Case. Have them underline the Nominative Case once and circle the pronouns used in the Objective Case.

Evaluation: Given ten (10) sentences, the student will correctly identify the personal pronouns used in the Objective Case in those sentences.

Objective: The student will be able to identify personal pronouns used in the Possessive Case, when given certain sentences.

Activities: Discussion: There is one more way that the personal pronoun can be used in another case and this is called the Possessive Case...Pronouns that show ownership.

1. List the possessive pronouns on the board. (my, mine, your, our, ours, his, her, hers, its, their, theirs,)

2. Given sentences, the student will underline the personal pronoun used in the possessive case.

3. The student will write sentences using the personal pronoun in the possessive case.

4. Given sentences with the pronouns used in the Nominative Case, the Objective Case, and the Possessive Case, the student will identify each correctly.

Evaluation: The student will correctly identify the personal pronouns used in the Possessive Case in ten (10) sentences.

Objective: The student will be able to identify the Declarative Sentence. He will also be able to punctuate it correctly.

Activities:

1. Discussion. We know that sentences supply a complete thought. There are different types of sentence Introduce the term "Declarative Sentence." This type of sentence tells us something, states a fact.

Ex. Crater Lake is in Oregon.

2. Write some Declarative sentences on the board. Ask the student to state how each is punctuated.

3. Have the student write some Declarative sentences.

4. Write some Declarative Sentences on the board. Put some of the other types as well. Have student identify the Declarative Sentence.

Evaluation: Given ten (10) sentences, the student will be able to identify which ones are Declarative. The student will also write three (3) Declarative Sentences of his own, punctuating them correctly.

Objective: The student will be able to identify the Imperative Sentence. He will be able to punctuate it correctly.

Activities: Discussion: An imperative sentence requests, [illegible] instructs or orders. It ends with a period.

1. Give examples of imperative sentences.
   a) Tell me about it.
   b) Don't answer that question.
2. Have the student make up some imperative sentences.

Be certain he punctuates it correctly.

4. Mix some sentences on the board, using Declarative and Imperative. Have the student identify each kind and put the correct punctuation mark at the end.

Evaluation: Given ten (10) sentences, the student will be able to identify which are Imperative. He will also compose three (3) Imperative Sentences at this time.

Objective: The student will be able to identify the Interrogative Sentence. He will also be able to punctuate it correctly.

Activities: Discussion: An Interrogative Sentence asks something. It ends with a question mark. (?)

Have the student write some Interrogative Sentences on the board. Make certain he punctuates them correctly.

Mimeo a sheet with the three different types of sentences studied so far. Have the student identify each sentence and punctuate each one correctly.

Evaluation: Given 10 sentences, the student will be able to identify which ones are Interrogative. He will also write three Interrogative Sentences of his own, punctuating them correctly.

Objective: The student will be able to identify the Exclamatory Sentence. He will also be able to punctuate it correctly.

Activities: Discussion: An Exclamatory Sentence expresses joy, surprise, anger, excitement or other strong feeling. It ends with an Exclamation mark (!).

Give examples on the board. Show how it is punctuated.

Have the student compose examples of Exclamatory Sentences of his own, punctuating each one correctly.

Put sentences on the board, some of each of the four types studied. Have the student identify each type and punctuate correctly.

Evaluation: Given ten (10) sentences, the student will identify the Exclamatory ones and compose three Exclamatory ones of his own, punctuating them correctly.

Objective: The student will be able to show how nouns show Possessions.

Activities: Discussion: When you speak of Tom's dog, you mean that Tom possessess or owns a dog. The word "Tom's is the possessive form of Tom. In the same way, Judy's book means the book that Judy owns.

There are three rules for forming the possessive of nouns. They are the following:

1. To make most singular nouns show possession, add an apostrophe and s ('s).
2. To plural nouns that end in s, add only the apostrophe (').
3. Plural nouns that do not end in s, add an apostrophe and s ('s).

Put examples of each rule on the board.

Have student change some more examples to possessive form.

Ex. Tom-Tom plus 's - Tom's
Father - father plus 's - father's
Boys - boys plus ' - boys'
Children - children plus 's children's

Have student do similar examples at his seat. Discuss with the class.

Put sentences like the following example on board, have the student copy the sentences, putting the apostrophe where it belongs to show possession.

Ex. The mens bags were in my fathers car.
The men's bags were in my father's car.

Evaluation: Given fifteen (15) nouns, the student will change the nouns into the possessive form correctly.

Objective: The student will be able to identify correctly the Direct Object in a sentence.

Activities: Discussion: Review of what is a noun; what is a verb.

1. A noun after the verb in a sentence is called a Direct Object.

2. Put some sentences on the board. Have the student find the noun which follows the verb in the sentence. The is the Direct Object.
Ex. My sister reads magazines in her spare time.

3. Give the student a sheet of sentences. Have him underline the Direct Object contained in each.

Evaluation: Given sentences, the student will identify correctly the Direct Object contained in each.

Objective: The student will be able to identify correctly the Indirect Object in a sentence.

Activities:

1. Discussion: Write the sentence "you give me the book." on the board. You give what? the book. The book is the Direct Object. What then is "me"? This is called an Indirect Object. The Indirect Object is usually to whom or for whom something is given.
Ex. Give Tom the paper. Who are you giving something. to? What then is the Indirect Object.

The Indirect Object usually comes right after the verb in the sentence, unless there is the word "to" present.
Ex. You give the book to me. Book is D.O., me is the I.D.

2. Write sentences on board. Have student locate the D.O. and the I.O.
Give the student some practice sentences. Have him underline the D.O. and circle the I.O.

Evaluation: Given sentences, the student will identify correctly the Indirect Object present in each sentence.

Objective: The student will be able to identify adjectives present in a sentence and state the function of an adjective.

Activities:

1. Discussion: Write these two sentences on the board.
1. Mr. Bradford drives a truck.
2. Mr. Bradford drives a small, red truck.
What word in the second sentence tells you which

kind of truck Mr. Bradford drives? These words make the meaning more exact. "Small" and "red" are called adjectives. Adjectives are used with nouns and pronouns. They are called modifiers because they change or modify the meaning of the word they go with.

Only the adjectives differ in the following sentence. Does the adjective change or modify the picture you have in your mind as you read the sentence?

1. Jack drove down a crowded road.
2. Jack drove down a deserted road.
3. Jack drove down a narrow road.
4. Jack drove down a bumpy road.
5. Jack drove down a dusty road.

When an adjective is used with a noun, it limits or modifies the meaning of the noun. It makes the meaning more exact.

Adjectives can tell how many: Sue owns three books.
Adjectives can tell what kind: Mary wore a red dress.
Adjectives can tell which one: These (this, that, those) books are mine.

2. Write sentences on the board. Have the student underline the adjective. Have him state which noun it modifies, or tells about.
3. Have the student use a practice sheet. He will circle the adjective and underline the noun it modifies.

Evaluation: Given sentence the student will identify correctly the adjectives present in each. He will also state the function of an adjective.

Objective: The student will be able to identify adjectives which modify pronouns.

Activities:

1. Discussion: You have learned that adjectives modify or change the meaning of nouns. Adjectives also modify pronouns. If necessary, review pronouns.
2. Write these sentences on the board. What pronoun does each of these adjectives modify?

a) Everybody, tired and hungry, left for home.
b) Bert tried to avoid anything difficult.

3. Write some sentences on the board. Have student identify the adjectives . Have him also identify the pronoun the adjective modifies.

4. An adjective is a word that modifies a noun or a pronoun.

5. Give the student a practice sheet. Have him identify the adjective and the pronoun that the adjective modifies.

Evaluation: The student will correctly identify the adjective that modifies the pronoun in 10 sentences given to him.

Objective: The student will be able to state the function of an adverb and identify adverbs present in sentences.

Activities:

1. Discussion: Adjectives modify nouns and pronouns. Adverbs modify verbs, adjectives and other adverbs.

2. Adverbs usually tell, how, when, where, or how much about the words they modify.
    a) The truck moved slowly. (how)(modifies verb)
    b) The doors will open soon. (when) (modifies verb)
    c) Betty was extremely happy. (how much) (modifies adjective)
    d) The man walked away. (where) (modifies verb)
    e) The door opened very slowly. (how)(modifies adverb)

3. Many adverbs end in "ly"

4. Function: Adverbs modify verbs, adjectives and other adverbs.

5. Write more sentences on board. Have student identify adverb and state what it modifies.

6. On practice sheet, have student identify the adverbs present in each sentence.

Evaluation: The student will state the function of an adverb. Given 10 sentences, he will correctly identify the adverbs present in each.

Objective: The student will be able to locate and identify the Predicate Nouns present in a sentence.

Activities:

1. Review Linking Verbs.
2. Discussion.
   - a) Write these sentences on board.
     1. The colt was a winner.
     2. The pirate was a thief.
     3. The captain had become a swindler.
   - b) Have student identify the nouns present and the linking verb.
   - c) The two nouns are closely related. The linking verb provides the link between them.
3. Write sentences on board. Have student locate the noun that follows the linking verb. Tell him that this is called a "Predicate Noun".
4. Using a practice sheet, have student locate the Predicate Noun and identify it.

Evaluation: Given 10 sentences, the student will locate and correctly identify the Predicate Noun present in each.

Objective: The student will be able to correctly identify Predicate Adjectives present in sentences, he will also be able to compose some of his own.

Activities:

1. When an adjective follows a state-of-being verb or linking verb and modifies the subject, it is called a Predicate Adjective.

   Ex. The sky was gray.
   This flower is lovely.
2. Write sentences on board, having student identify the adjective in the predicate that modifies the subject.
3. Have student complete sentences with Predicate Adjectives.
   - a) Lemons are ________.
   - b) The boys were ________.
   - c) I am ______________.

4. Have student compose sentences of his own, using Predicate Adjectives.

Evaluation: Given 7 sentences, the student will be able to correctly identify the Predicate Adjective present in each. He will also compose 3 sentences of his own using Predicate Adjectives.

Objective: The student will be able to state whether a verb is Intransitive or Transitive.

Activities:

1. Discussion: When a verb has an object, it is said to be a Transitive Verb.

Ex. He paid the bill. Paid has an object (the bill) (Trans.)

He paid. Verb has no object. (Intrans)

2. Given examples on board. Have student identify which is Trans. and which is Intrans.

3. Give the student a practice sheet with similar examples. Have him identify the verb and state whether it is Transitive or Intransitive.

Evaluation: Give 10 sentences, the student will state whether the verb present in each is Transitive or Intransitive

Objective: The student will be able to reverse the natural order of a sentence pattern and form an inverted sentence.

Activities:

1. Discussion: Most sentences have the subject first, followed by the predicate.

Ex. An ambulance came around the corner.

To make the sentence more interesting we can change the pattern and have the predicate come first, followed by the subject.

Ex. Around the corner came the ambulance.

2. Have the student reverse the natural order of the following sentences. Discuss with class.

a) Many coins are in his collection. In his collection are...

b) The success of the plan depends on him. On him depends the...

c) A bright Indian blanket was over his shoulder.
Over his shoulder was...

d) A cloud of smoke came from the chimney.
From the chimney came...

3. Give the student a practice sheet with similar examples.

Evaluation: The student, when given ten (10) sentences written in the natural order, will correctly write the sentences in the form of the Inverted Sentence.

Objective: The student will be able to use expletives correctly to begin a sentence.

Activities:

1. Discussion: Many of our sentences begin with "There is" "There are" Where or here.
   - a) These words are never subjects. In sentences beginning with these words, the subject usually follows the verb.
     1. Where are the pencils? (Pencils is the subject)
     2. There are your books. (Books is the subject)
     3. Here is the path. (Path is the subject)
2. Before you can choose a verb, you have to know what the subject is. You have to know whether it is singular or plural.
   - a) Where (are, is) the paper?
   - b) Here (are,is) the boys.
   - c) There (are, is) the window.
3. Give sentences, have the student locate and identify the subject.
4. Give sentences, have the student correctly write the verb.

Evaluation: Given sentences with the verbs blanked out, or given a choice of verbs, the student will correctly write sentences that begin with expletives.

Objective: The student will be able to identify Helping verbs.

Activities:

1. Discussion. A verb often needs one or more helping verbs. These help to tell us the tense, or create a certain mood for us.

2. You have often read sentences or used sentences with verbs like the following: has eaten, does sing, have flown, do find, had gone, etc.

    a) In the verb has eaten, "eaten" is the main verb and "has" is its helping verb.

3. Give examples. Have student identify main verb and helping verb.

4. Sometimes the main verb and its helper are separated. The word that separates the main verb and the helping verb is called a negative adverb.

    a) EX. These plants did not bloom. (not is a neg. adv.)

5. Give sentences. Have student identify the main verb and the helping verb.

6. Have student write sentences that contain a helping verb.

Evaluation: Given 10 sentences, the student will correctly identify the helping verbs and the main verbs present in each.

Objective: The student will be able to define the term "phrase" and identify it in terms of its forms noun phrases and verb phrases.

Activities:

1. Discussion: Introduce the term phrase. A group of words used as a unit, here the term is used also in the expressions of Noun Phrase and verb phrase which sometimes consist of single words.

2. The sentence has two main structures, These are the noun phrase and the verb phrase. The noun phrase functions as the subject of a sentence, the verb phrase functions as the predicate.

    a) The man rode the horse.

        1. The noun phrase-the-man-functions as the subject and the verb phrase-rode a horse-functions as the predicate.

3. Noun phrases may be in the predicate too. Point out the noun phrases in the following examples. They all function as objects of verbs.

   a) Sam likes everybody.
   b) The cat caught the mouse.
   c) We helped Bob.
   d) The calf showed fear.
   e) Bill saw him.

4. Another way a noun phrase is used is after one of the words"be"- am, is, are, was, were, may be etc. A noun phrase used in this position is said to function as a complement.

   a) Peter was the winner.
   b) It was she.

5. Give examples of each type of use or function of the noun phrase. Gradually add the next type to it and have the student differentiate the individual functions, until all three functions are easily identified by the student.

6. Noun phrase is the term for the general structure that may function as a subject, object or complement.

7. Introduce the term "Verb Phrase".

   a) A verb phrase is a general structure too. In a simple sentence, a verb phrase functions as the predicate. A verb phrase may be composed of one particular structure-a-verb-or of several particular structures-verb plus object, verb plus adverbial of place, etc.

   b) A verb phrase does not always contain a verb But if it doesn't it must contain one of the forms of "be."

8. Write sentences on board. Have student point out the verb or the form of be in each sentence.

   Ex. Bob helped me.
   Everyone is ready.
   They ruined the car.
   Mr. Smith was a sailor.

9. In each of the following sentences, have student

point out the verb phrase, remembering that a phrase is a group of words used as a unit.

Ex. The dog was in the kennel.
Nancy swallowed her gum.

10. Review the various functions of the noun phrase. Combine examples with the verb phrase. Have student identify the noun and verb phrases contained in various sentences. It may prove beneficial to concentrate on the function of the noun phrase as used as the subject. Then introduce verb phrase. This depends on the progress of the class. The functions of the noun phrase as objects of the verb and as complements may be too confusing to be done at one unit session.

Evaluation: The student will define the term "phrase." He will when given sentences, identify the noun phrases and the verb phrases present in each.

Objective: The student will be able to define the term "clause" and be able to identify one within the sentence.

Activities:

1. Discussion: Introduce the term "clause."
A clause is a structure that has a subject and at least part of the predicate that expresses a thought.

a) The boy that had been there left yesterday.

Playing the detective, find a complete thought in that sentence... The boy had left, or the boy left yesterday. This has a subject and a word that shows tense, and says a thought. It is a clause.

2. Give the student more sentences to work with and find the clause. Discuss why what he choses is a clause.

3. Give the student a practice sheet where he must stay, the detective and solve the puzzle, finding the clause.

Evaluation: The student will define the term clause. He will, when given sentences, write the clause that is contained in each.

Objective: The student will be able to identify Compound Subjects and Compound Predicates in sentences.

Activities:

1. Discussion: When two or more subjects are used with the same predicate, they are called a Compound Subject. Compound means having more than one part.
   a) Example: Tom and I saw the rocket.
2. Write sentences on the board that have a Simple Subject and Compound Subject. Have student identify the sentences that contain the Compound Subject. Discuss in class.
3. Give the student predicates and have him compose Compound Subjects for each one.
   a) Example: Caught the grasshoppers.
   Built our new house.
4. When two or more verbs are used with the same subject, they are called Compound Verbs. Do similar exercises as above.
   a) The dog barked at the milkman.
   The dog barked and growled at the milkman.(C.V.)
5. Have the student think of Compound Verbs or predicates for some subjects.
   a) The hurricane
   b) Noisy crows
6. Given sentences with compound verbs and simple verbs, have the student identify the ones with the compound verb. Discuss his reasons for his selection.
7. Write sentences on the board. Have the student identify the Compound Subject and Compound Verb that may be present in each.

Evaluation: Given 10 sentences, the student will identify the compound subjects and compound verbs that are present in each.

Objective: The student will be able to define the term "conjunction," and identify it when present in a sentence.

Activities:

1. Discussion: Introduce term: Conjunction. A word that is used to join words or groups of words is called a conjunction.

2. Sentences: Simple Subject: John may win.
Simple Subject: Howard may win.
Compound Subject: John or Howard may win.

The word or is used to join words together. It is a conjunction.

3. When three or more subjects are combined in a compound subject, use commas to separate them. The conjunction is placed before the last subject.

a) The apple trees, the peach trees and the cherry trees were ruined by insects.

4. Write sentences on the board. Have the student identify the conjunction present in each and state why the word he selected is a conjunction.

Evaluation: The student will define the term "conjunction". He will identify correctly the conjunction present in 10 sentences given to him.

Objective: The student will be able to choose the verb which will be in agreement with the subject of the sentence.

Activities:

1. Discussion: The verb must always agree in number with its subject. Here the word "number" means singular or plural. If the subject is singular, use a singular verb. If the subject is plural, use a plural verb.

a) One boy talks, Two boys talk.

2. Use plural verbs with compound subjects joined by "and",use "are" and "were" with compound subjects joined by "and".

a) Betty swims well. Betty and Sue swim well.

b) A dog is a good pet. Dogs and cats are good pets.

3. Write sentences on board with the two choices of verbs. Have the student select the correct one, stating his reason for his selection.

4. Give the student a work sheet. Have him underline the correct verb that should be used with the subject.

5. When the compound subject has "either" or "neither", use the singular form of the verb. When "or" is used in the compound subject, the singular form is used.

   a) Neither Joan or Mary is going.
   b) Either Joan or Mary goes home by bus.

6. Write sentences on the board that have compound subjects joined by and and by or. Have the student select the correct verb, explaining his selection.

7. In sentences beginning with "there, where or here", you must remember that these words are never subjects of the sentence. In sentences beginning with these words, the subject usually follows the verb. Before you can choose the right verb, you have to know what the subject is. You have to know whether it is singular or plural.

   a) Example: Where are the pencils. Pencils is the subject, it is plural.
   b) There are four quarters in a football game. Four quarters is the subject, it is plural.
   c) Here is your coat. Coat is singular.

8. Write sentences on the board. Give a choice of singular and plural verbs. Have the student select one and explain the reason for his selection.

9. Give the student a sheet with sentences having a choice of verbs. Use examples of all the exercises done up to this point with verb agreement. Have a class discussion of selections made and the reasons for them.

Evaluation: Given sentences with choices of verbs, the student will correctly select the verb that is in agreement with the subject.

Objective: The student will be able to define the term "Appositive", and be able to identify an Appositive within the sentence.

Activities:

1. Discussion: Introduce term "Appositive."
An Appositive is a word or group of words that means the same as the noun just before it.
   a) Mr. Brown, the scoutmaster, moved away.
   b) Our neighbor, Mr Davis, drives the schoolbus.
   The Appositive gives more information about the noun.
2. An Appositive is set off by commas.
3. Write sentences on the board. Have the student identify the Appositive present in each. Have him give the reason for his answer.
4. Have the student compose sentences that contain Appositives.

Evaluation: The student will answer the question: What does an Appositive do? Given 7 sentences, he will correctly identify the Appositives present in each. He will compose three sentences that contain Appositives.

Objective: The student will be able to state the function of Adjective Phrases with in the sentence.

Activities:

1. Discussion: Groups of words used to modify nouns or pronouns are called Adjective Phrases.
2. What do the following modify in "" marks tell about the noun house?
   ". a) That is a house of mystery." (what kind)
   b) The house on 42nd street" is vacant. (which one)
   c) Houses "by the dozens" are being built.
   (how many)
3. Think of a phrase that could fit the blank below. Discuss.
   a) The castle _____ looked forbidding.

4. Write sentences on the board. Have the student identify the Adjective Phrase present in each. Discuss why it is an Adjective Phrase.

5. Give the student a work sheet. Have him identify the Adjective Phrases present in the sentences. Have some sentences without Adjective Phrases, to determine the student's ability to identify such.

Evaluation: The student will state the function of an Adjective Phrase. He will when given sentences, identify correctly the Adjective Phrase present in each.

Objective: The student will be able to state the function of an Adverb Phrase. He will be able to identify an Adverb Phrase within the sentence.

Activities:

1. Discussion: Phrases that modify verbs are called Adverb Phrases.

2. Find the verb in the following sentences. What does each phrase tell about the verb it modifies?

a) The knight bowed his head with great humility. (how)
b) He eagerly read the book. (how)
c) The boys and girls walked downtown. (where)
d) The club will meet tomorrow. (when)

3. Adverb phrases tell; how, when, where.

4. Circle the verbs in the following sentences. Underline the adverb phrase.

a) The gray river moved sluggishly.
b) The column marched forward.
c) Muffled voices were heard in the movie studio.

5. Tell why each phrase underlined above is an adverb phrase. (Tells how, where or when)

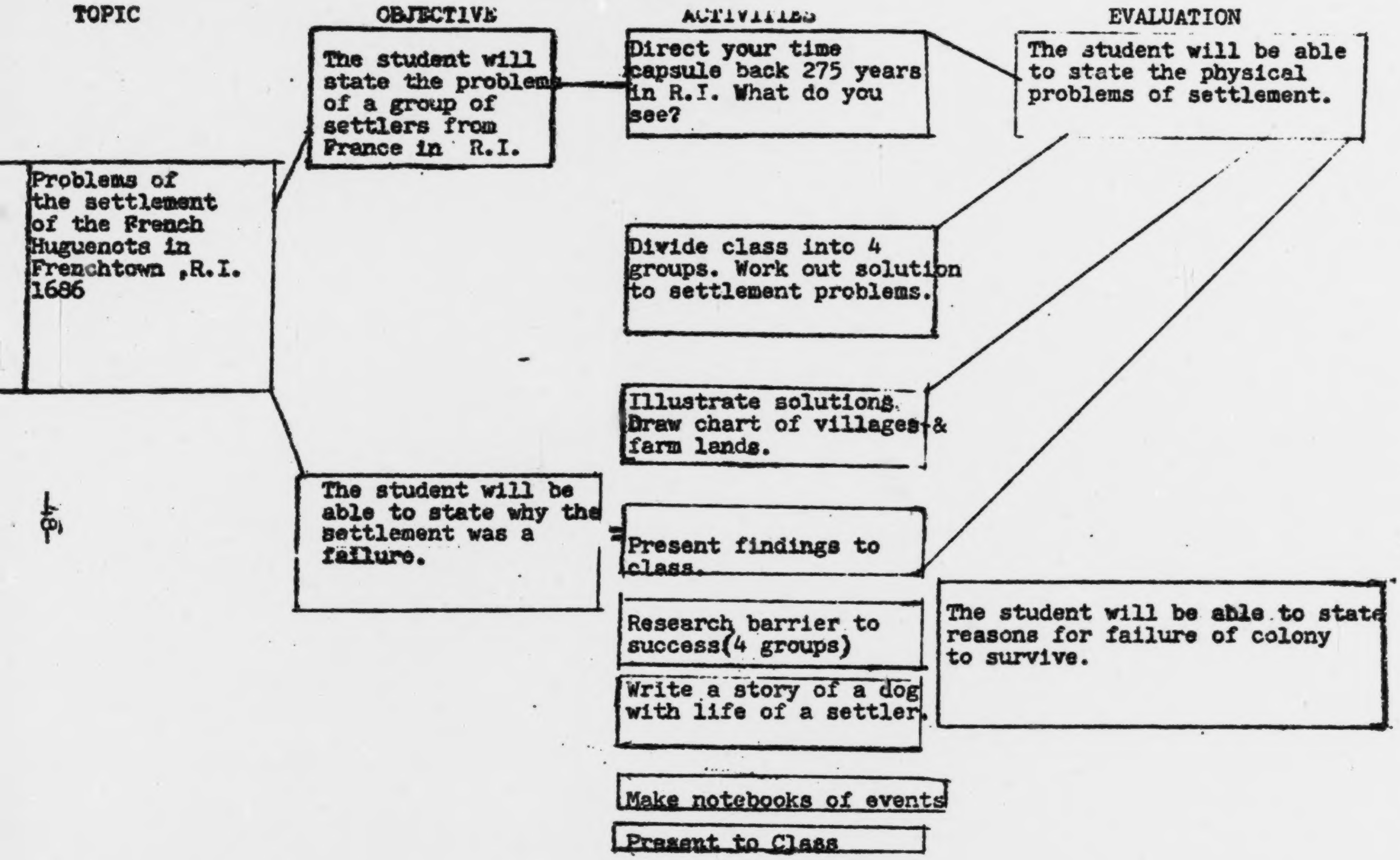
6. Give the student a work sheet. Have him identify the verb and the adverb phrase. Discuss the function of an adverb phrase.

Evaluation: The student will state the function of an adverb phrase. Given sentences, the student will correctly identify the adverb phrase present in each.

CHAPTER II

SOCIAL STUDIES

STORY OF THE HUGUENOTS



TOPIC

Problems of the settlement of the French Huguenots in Frenchtown ,R.I. 1686

OBJECTIVE

The student will state the problems of a group of settlers from France in R.I.

The student will be able to state why the settlement was a failure.

ACTIVITIES

Direct your time capsule back 275 years in R.I. What do you see?

Divide class into 4 groups. Work out solution to settlement problems.

Illustrate solutions. Draw chart of villages & farm lands.

Present findings to class.

Research barrier to success(4 groups)

Write a story of a dog with life of a settler.

Make notebooks of events

Present to Class

EVALUATION

The student will be able to state the physical problems of settlement.

The student will be able to state reasons for failure of colony to survive.

THE HUGUENOTS

From its earliest days, the colony of Rhode Island had a difficult time in establishing and keeping its borders with its neighboring colonies, Massachusetts and Connecticut. Roger Williams, fleeing from persecution in Massachusetts, first sought refuge in Seekonk, believing he was outside the borders of the Massachusetts colony. Settlers joined him there, driven by the intolerance of the Massachusetts government. They built shelters and planted crops. When the Plymouth Colony claimed his land as theirs, Williams and his group turned south to Narragansett Bay. Here Roger Williams purchased from the Narragansetts land on the river banks. One of the reasons for Williams' quarrel with Bay authorities was his firm belief that the true owners of the land were the Indians. The other settlers believed their land was held by right of discovery and settlement.

The boundaries agreed to by Roger Williams and the Indians were contested by both Massachusetts and Connecticut. Both colonies later claimed lands within Rhode Island borders.

Many were the issues and quarrels because of this conflict of interest. The Atherton Land Company, which had gained land by doubtful means from the Indians, was made up of prominent men in Massachusetts and Connecticut. They had obtained large tracts of land in what is now East Greenwich and Kingston. They had asked Roger Williams to interpret for them when they came as representatives of Connecticut, but he refused, denouncing their greed for land.

The designing Atherton Company, through it agents in London, sold to an unsuspecting group of French emigrants called Huguenots a territory that nearly ten years before had been parceled out by the Rhode Island Assembly to the Proprietors of East Greenwich.

The attempt of the French Huguenots to settle in East Greenwich was one of the most tragic events in the early history of our state. In 1686 forty-five Huguenot families arrived to take possession of the land they thought they had bought. These Huguenots were of the Protestant faith, and had been persecuted in France for many years. They, like the earliest settlers in Plymouth, came to America to escape religious persecution and to worship as they felt proper.

The land in East Greenwich on which they settled was a large tract, amounting to four to five thousand acres. Each family was to be entitled to one hundred acres of upland besides meadow land in proportion. The price was to be £ 20 a hundred acres, if paid immediately, or £ 25 if payment was deferred for three years. The leaders of the group, Pastor Ezekial Carre, was to have one hundred and fifty acres, in addition to another one hundred acres called glebe land, and fifty acres was set aside for the support of the schoolmaster. Dr. Ayrault, one of the wealthier men in the group, wrote that a church was built "so we could enjoy our worship to God, it being a very wilderness country".

Five hundred French families, we are told, would have come to join their countrymen in Narragansett had the colony prospered. There were many other Huguenots who had sought refuge in other colonies. Rhode Island, however, with its promise of religious liberty to all, seemed to hold a hope for peaceful living. The settlers began to improve the land, building twenty-five houses and a church, and planting orchards and gardens. They planted mulberry trees in an attempt to begin the silk industry, with which they had been familiar in their old homes in the south of France. They were a hard-working, industrious people. But trouble-filled days lay ahead of them.

In 1687 the French and Indian War broke out, and other colonists became suspicious of anyone with a French name or

French background. Rhode Island colonists insisted on searching the Huguenots' homes for arms. The Huguenots protested to Governor Andrews, and upon taking the oath of loyalty to the King of England they were left in peace.

After four years of living and working in their new homes, these people found the land they had purchased in good faith was disputed territory. The legislature of Rhode Island had made a grant of this territory and had established the township of East Greenwich. Thus Rhode Islanders already owned the land the French Huguenots had built upon. Rhode Islanders began to dispute with the Huguenots, cutting their hay, pulling down their fences, and building roads through their fields.

In 1687 Rhode Islanders carried off forty loads of hay from the meadow of Frenchtown. An appeal to Governor Andrews brought an order to divide the hay, half to the French and half to the English.

The Huguenot settlement lived in fear of further threats and destruction of their crops. Their church was burned, and some of the English neighbors who attempted to help the Huguenots were in turn badly treated by those who claimed the land. The settlement gave up in the face of such opposition, and many families migrated to New York and Boston, and to South Carolina. A few of the families remained in Rhode Island. Dr. Ayrault and his son settled in Newport, where they became prosperous citizens.

Now, the only reminder of the Huguenot settlement is the name of a road in East Greenwich - Frenchtown Road.

Class Discussion Topic:

Who were the Huguenots?

What is a settlement?

What does persecuted mean?

From whom did the Huguenots purchase the land?

How much land did they purchase?

Where was the settlement to be ?

Who was their pastor?

How did the settlers begin their work?

How was the land assigned?

How many houses were built?

What was the cost of the house lots?

What structure would have been most important to these exiles?

How difficult was their labor in building? Why?

How would you go about building in a new settlement?
What would you need?
What did they need to know before they planted their crops?

What did the Huguenots need in their planting?

What new industry did they hope to start?

What were some of the problems and hardships people like the Huguenots would have to face?

When did the English first begin to show hostility?

What was the underlying problem in the relationships between the English and the Huguenots?

Was the outcome a case of religious intolerance on the part of the English settlers in the Rhode Island colony?

Was it caused by the suspicion of the French during the French and Indian War?

Was it caused by unscupulous land speculators?

Was the basic problem boundary disputes?

If the outcome of this situation had been different, what might Rhode Island have gained?

Choose two teams to debate the issue, one from the Rhode Island colonists' viewpoint, and one from the Huguenots'side.

Choose two groups of students, one group to represent the Huguenots and the other to represent the English settlers. The Huguenots' and their leaders have come to protest. to the English settlers' leaders the harassment being suffered. Let one side present the Huguenots' case, and let the English reply with statements about the true ownership of the land.

Do not lock the students into one solution to this problem, but rather have them work out what they believe is an equitable settlement. It might be interesting to break the class into one additional group to represent the interest of the local Indians.

As accurately as possible give the students or have them research the area at the time of the Huguenots and develop maps and population figures. Have the class apportion the land in what they consider an equitable fashion. Have them take into account the rights of each group as well as their needs. This can be developed into a secondary unit covering the basic requirements for a successful colony and by analogy for modern city planning. Have the students map out the requirements for colonizing the same area today and see what the differences might be.

In class discussion have students evaluate the historical solution to the Huguenot problem in terms of historical hindsight and predict the evaluation of their solution by a group of students in 2071.

OBJECTIVE: The student will be able to state the problems of a group of settlers from France to Rhode Island in 1686.

1. Imagine yourself in a time capsule. Direct the indicator back 275 years in Rhode Island. You are a part of a small group of French Huguenots landing at the port of Providence to take up land in an area called East Greenwich. You are an alien people settling in what is almost a wilderness. What are the problems you would face.

2. Working on this premise break the class into groups to research the problems and solutions for developing a settlement in this area. Various groups could be responsible for topics such as: shelter, food & agriculture, defense, government, church and education, and the settlements of the territorial disputes with the resident Rhode Islanders. A goal of these groups would be to design a settlement incorporating the classes solution to these and other problems.

3. The class should illustrate their solutions with any or all of the following:
   a. Map the settlement, the allotment of the land, villages, agricultural areas, roads and transportational systems etc.
   b. Models of the settlement as well as homes, clothing, weapons etc. can be constructed.
   c. Have the students write a story about a day in the life of one of these people.

4. Have the students compare and contrast their solutions to the settlers problems with historical fact and evaluate the merits of both.

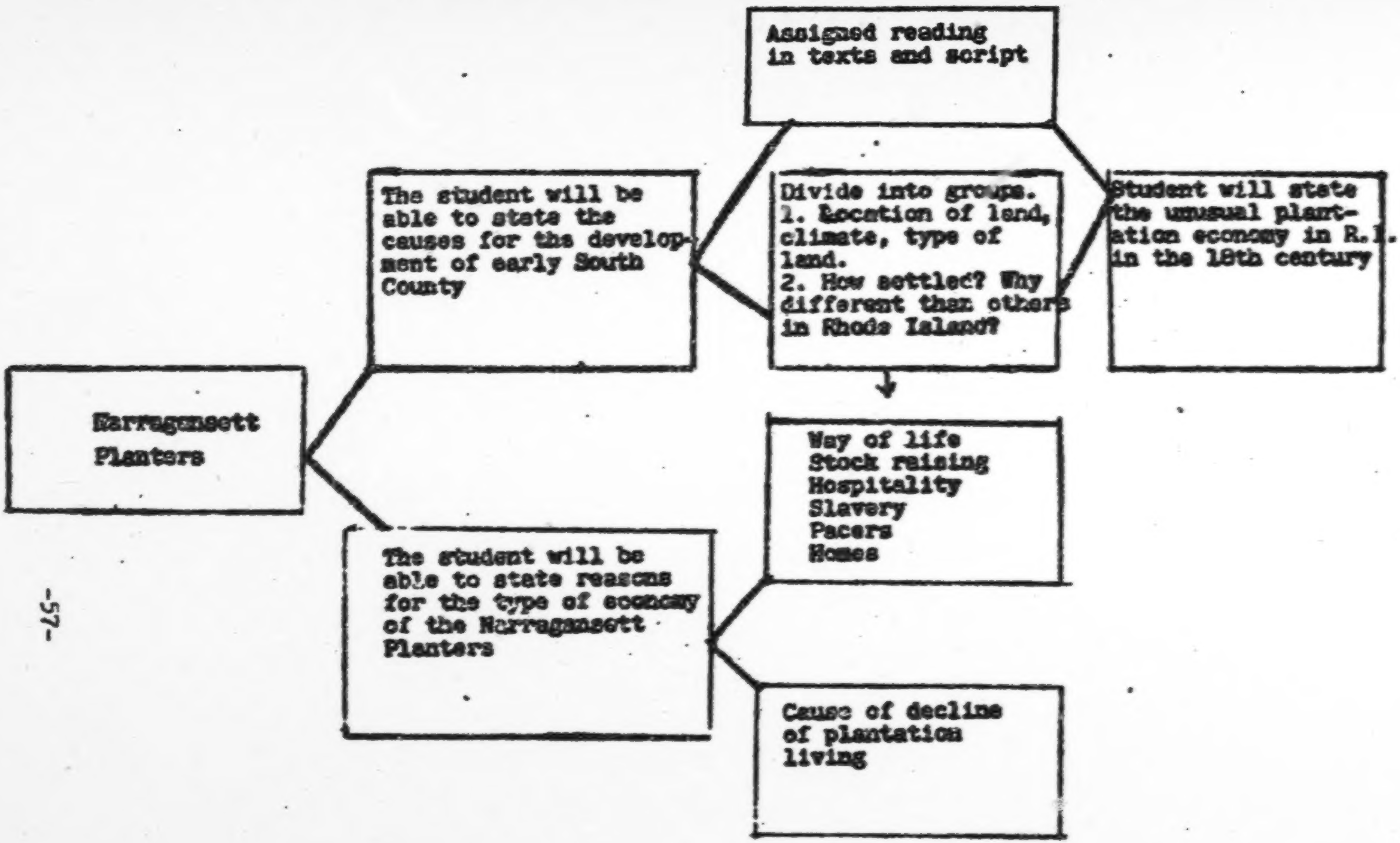
5. An interesting topic for class discussion might begin with the premise that you are the brother of a Huguenot settler about to leave to colonize another area of the new world. You have received

many letters from your brother about the problems in R. I. What would you do differently in view of these letters?

The class should be encouraged to include in their plan a possible solution to or means of avoiding the following problems encountered by the Huguenots.

a. Alien races
b. Outbreak of the French and Indian wars.
c. Boundary dispute between R. I. and Connecticut.
d. The sale to the Huguenots, by the Atherton Company, of land already owned by another.
e. Physical attacks.
f. Roads run through property.
g. Destruction of fences.
h. Forcible taking of crops.

TOPIC | OBJECTIVE | ACTIVITIES | EVALUATION



Narragansett Plantters

The student will be able to state the causes for the development of early South County

The student will be able to state reasons for the type of economy of the Narragansett Planters

Assigned reading in texts and script

Divide into groups.
1. Location of land, climate, type of land.
2. How settled? Why different than others in Rhode Island?

Way of life
Stock raising
Hospitality
Slavery
Pacers
Homes

Cause of decline of plantation living

Student will state the unusual plantation economy in R.I. in the 18th century

THE NARRAGANSETT PLANTERS

The full title of our state is "The State of Rhode Island and Providence Plantations".

Why "Plantation"? When we read about the south we read about southern plantations. We have an idea of much land with many slaves to work it. We learn too that these plantations grew cotton and tobacco in large quantities, and that the owners were wealthy people.

In the southern part of the colony of Rhode Island in the 1700's there developed a region specializing in stock production. There developed a type of plantation economy and a landed aristocracy quite unlike all the rest of New England society. The land lying on Narragansett Bay and the beginning of Long Island sound gave this area an unusually mild climate. Its fertile soil and gently rolling hills gave excellent grazing land. The territory had many large salt ponds, making it easy to fence in natural reservations on the way to the beaches - East Greenwich, Wickford, Kingston, Charlestown and Point Judith. This region had been in dispute between Rhode Island and Connecticut for more than half a century. You have already studied about this dispute in relation to the story of the Huguenots.

Because of this dispute, the land had not been settled in the usual township pattern. It was acquired by a small number of wealthy land owners, for only men of large means and considerable political power could maintain themselves during the long struggle over the boundaries and ownership of the land.

These proprietors' estates were sometimes ten miles square, and contained from one thousand to ten thousand acres. These acres were cultivated by slave labor, both Negro and Indian. In 1730, South Kingston had a population of 965 whites, 333

Negroes, and 223 Indians. In 1748, 1,405 whites, 380 negroes, and 193 Indians. Each of the land-owning families had five to forty slaves who provided the necessary labor for stock farming and dairying. The Narragansett region exported wool, dairy products, and cattle to other colonies.

Because of the wars being waged in Europe, the French Revolution, and Napoleon's campaigns, the colonies were the neutral carriers of Europe, giving a great advantage to our farm products. The wife of Richard Smith, the first settler in Wickford, brought with her from England the recipe for making Cheshire cheese. The cheese was of excellent quality, and was sold in this country and in Europe along with the corn and barley raised here.

In one man's inventory, he counted 4,060 pounds of cheese, valued at £ 558, or close to $3,000 in our money.

The owners of these large estates were hospitable people, and entertained a great deal. Inns were poor and gentlemen traveling were introduced by letter and were warmly received and entertained with lavish food, card games, and dances. Guests were taken on fishing parties in the bass season, and on hunting parties. Deer, foxes, partridges, grouse and quail were very plentiful in the woods and fields. English - style fox hunts with the hunters clad in red coats and wigs, accompanied by baying hounds were occassionally staged. Horse races on the beach of Boston Neck were held, with prizes of silver tankards as well as cash. Bets added further excitement, and stakes were high.

The homes were large, gambrelled-roofed buildings, with low ceilings and huge fireplaces. A home of one of the planters near Wakefield was described like this: "On the first floor was the great room, the great room bedroom, the dining room the dining-room bedroom, northeast bedroom, kitchen, closet, store room, cheese room, and milk room." Upstairs were more sleeping rooms. In the open attic were places where weaving and spinning were done. Negro slaves lived in a separate wing.

In addition to cheese, corn, barley, and wool, the Narragansett Planters had one other export - the Narragansett Pacer. This was a horse, small, strong, and a fast animal. The origin of the horse remains a mystery. Rowland Robinson, the colony's first horse breeder, was supposed to have imported a spanish jennet (a small horse) which became the ancestor of the Narragansett Pacers. Robinson bred local mares with Arabian studs, to produce the pacers.

The pacers became the best and fastest horses in the colonies, and in a short time most South County planters were raising them. They were in great demand and sold profitably in the West Indies, Virginia, Kentucky, and Tennessee.

The pacers' gait was marvelous - extremely confortable to ride. According to the authorities of the 18th century, the horse's backbone moved in a straight line without swaying from side to side, as was true of most horses of that time.

These fleet creatures were at home in the water, an important characteristic, since there were many streams to be forded. After storms, the Pettasquamscutt especially would change its crossing places, and a good woman rider on a Narragansett Pacer might have to swim the rushing waters.

A Mrs. Antis Lee's account of a journey into Connecticut in 1791 spoke of riding thirty miles, staying in Plainfield overnight, and the next day riding forty miles to Hartford, where she stayed for two days, then continued on to New Haven. The account of the journey on a Narragansett Pacer tells of traveling through Connecticut, riding thrity miles the first day, forty the second, staying overnight two nights, then riding forty miles the next day, and forty miles the last day to each her home in Narragansett. Quite a trip for one horse!

You may wonder that such a valuable horse would be allowed to disappear. The chief reason for their disappearance seems to have been the extraordinary demand for them in the West Indies. Sugar brought sudden wealth to West Indian planters, and they could not get pacers fast enough for their wives and daughters. Their agent stayed at Tower Hill, and from season to season he would never let a good horse escape. The great demand for the horses led the plantation owners to try to raise more horses, and the result was that the breed simply could not meet the demand, and died out. Losing the pacers was an incident in the passage from slave holding plantation owners, to the moderate ways of farming people.

Well qualified tutors emigrated to the colonies and were employed in family instruction. The young men of the families completed their education in the families of learned clergymen Residence in such families was an excellent school in manners as well as improvement of the intellect. Young ladies were taught by tutors at home and "finished" in school in Boston. Books were not common in those days, but there were good private libraries, painting and portraits to indicate culture.

Slavery affected the life and customs of the proprietors. In the middle of the eithteenth century South Kingston had more than any other town except Newport.

Story is told about one Abigail imported by Roland Robinson and employed in his family. She was so contented she persuaded her master to send her back to Guinea for her only son and bring him back to be a slave. The life of the slaves must have been comparatively easy in South County!

When the slaves were numerous, they held an annual election, the third Saturday in June. The slaves assumed the power and pride of their masters and it was degrading to the reputation of the owner if his slave appeared in inferior apparel or with less money than the slave of another master of equal wealth. The horses of the wealthy landowners were on this day all surrended to the use of the slaves,with powdered wigs and cocked hats mounted on the best Narragansett Pacers, and sometimes with their master's sword and their ladies' on, pranced to the election. The voting began at ten o'clock. Tables with refreshments were spread and all the friends of the candidates were invited to eat. About one o'clock the vote would be taken by the voters in two lines. Noisy excitement ran high until the court commenced, then silence was proclaimed and later that no man could change sides. At dinner the governor was seated at the long table under a tree with the unsuccessful candidate at his right and his lady on his left. The afternoon was spent in dancing and atheletic exercises.

The servant of Elisha R. Potter was elected in 1800. The election was very expensive for his master. Soon after the election Mr. Potter had a talk with his slave who was elected and said that one or the other must give up politics or the expense would **ruin** them both! The negro abandoned politics!

With autumn came the corn husking festivals,all proprietors and intimate friends of the family were invited and the guests brought their slaves to assist in serving. After the husking dancing began, the music being furnished by natural musicians among the slaves. The gentlemen,richly dressed in velvets and broadcloths,would lead the ladies dressed in brocades through the stately minuet.

The whole social life was changed after the Revolution when slavery diminshed and the West Indian exports were reduced. Plantation and slavery were replaced by small farming and economy of living.

However, for at least a century this unusual life of the Narragansett Planters was a real part of Rhode Island.

TOPIC FOR CLASS DISCUSSION

Who were the Narragansett Planters?

Describe the area of settlement? Size of plantation.

What is the meaning of proprietors?

How did the settlement differ from the Huguenots?

Can you state reasons fon the success of their way of life?

Describe their homes? Contrast it with other colonial homes in R. I. at that time.

What made it possible for them to be such a hospitable people? (relate to general social climate.)

How were their visitors entertained?

How were strangers introduced?

Describe the education of their children?

Define culture? What makes a person cultivated?

Describe the corn husking festival? Does it differ from those you have read about in pioneer communities?

What's the difference in a "barn dance" and ball - which would you say Narragansett Planters had?

Describe the Narragansett Pacer?

Its origin

Its outstanding qualities

Its market demand

Where it was raised

How far was it reputed to have ridden in a few days trip - map out the trip?

How did this popular breed die out?

Slavery in Narragansett:

What was the triangle trade?

What aspects of plantation life made more help necessary?

How were the slaves treated in Narragansett?

Show two instances that can prove your point?

Describe a slave election?

What was the conclusion of one owner at the end of an election?

What were economic factors in the decline of plantation life in South County?

How long did this unusual type of living last?

Trips to South County:

Gilbert Stuart Snuff Mill
Hannah Robinson Rock - Tower Hill - Pettaquanscutt River

Run Slave Election - counting of votes

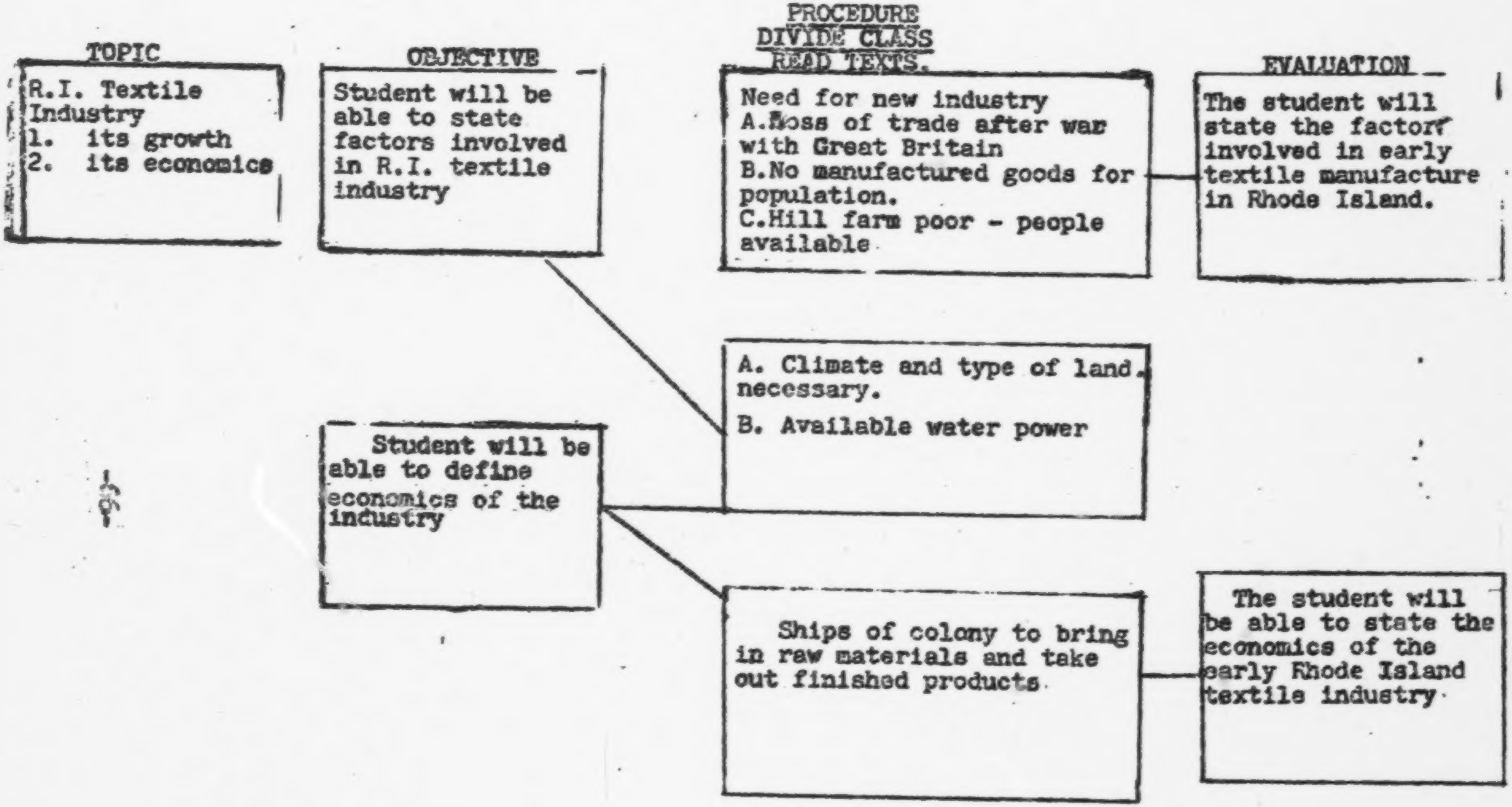
Plan a husking festival supper

Dress dolls in costumes

Break class into individual groups to further research a variety of aspects of the planters life: housing, clothing agriculture, defense, etc. Have each group report to the rest of the class on their particular topic placing emphasis on: a) visual presentation, models etc. b) encourage each group to go beyond the historical what and when to the why. For example, in construction drawings and models of the planters homes the children might consider the origin of the architecture, its similarity and differences from the contemporary English, and the reasons, climate, materials etc. for the differences.

One approach to this task might be to set the hypothetical situation that the class is a newly arrived group of planters and ask them to design from scratch their settlement given certain historical background and then compare what they developed with historical fact.

Topic for class discussion: Given the aid of historical hindsight, how might have the planters society been improved, what lead to its downfall and could such a system survive in todays world and why? What are the cultural differences between then and now that would allow a planters society to exist or not exist in the twentyth century?



TOPIC

R.I. Textile Industry
1. its growth
2. its economics

OBJECTIVE

Student will be able to state factors involved in R.I. textile industry

Student will be able to define economics of the industry

PROCEDURE
DIVIDE CLASS
READ TEXTS.

Need for new industry
A.Loss of trade after war with Great Britain
B.No manufactured goods for population.
C.Hill farm poor - people available

A. Climate and type of land. necessary.

B. Available water power

Ships of colony to bring in raw materials and take out finished products.

EVALUATION

The student will state the factor involved in early textile manufacture in Rhode Island.

The student will be able to state the economics of the early Rhode Island textile industry.

TOPIC	OBJECTIVE	PROCEDURE	EVALUATION
Genius of Samuel Slater	Student will state the abilities and efforts of Samuel Slater in the beginning of the cotton industry in Rhode Island.	Divide class Group I Research early life of Samuel Slater,his apprenticeship	The student will be able to state the contributions of Samuel Slater to the beginning of Rhode Island Textile industry
		Group II His emigration to United States	
		Group III His contact with Moses Brown. His agreement to work for him. His work on the spinning Jenny . First factory	
		Group IV His later success Description of and research about Slaterville His recognition as the "Father of American Industry"	

THE BEGINNING OF RHODE ISLAND'S INDUSTRIALIZATION

The story of New England industrialization, indeed, of early American industrialization as a whole, is the story of the cotton industry. "The industry brought the factory system to the United States and furnished a laboratory wherein were worked out industrial methods characteristic of the nation."

Attempts had been made in this country during the seventeen eighties to copy the English inventions. Among those who were experimenting with home-made water frames were one of the four celebrated Brown brothers of Providence, Moses, and his son-in-law, William Almy, "who were just the people to use some of their extra resources for an experiment which offered the triple attractions of difficult, possible profit, and patriotic service."

All early efforts proved unsuccessful, however, because the English inventions were too well guarded by stringent laws against the exportation of any models or drawings of machinery, and against the emigration of skilled workmen as well.

Workable spinning machinery was not constructed on this side of the Atlantic until the arrival in 1789 of Samuel Slater. "This firm's (Brown and Almy's) good luck in discovering Samuel Slater, who knew all the details of the Arkwright frame, gave them the lead over all who were trying to work from purely American sources."

Early in 1791 the new machinery, tended by nine children, turned out its first satisfactory yarn. This was the real beginning of cotton manufacture in America and Rhode Island was the center from which it spread during the next twenty years.

During the next two decades former associates started small mills on their own. By 1809 twenty-seven mills were in operation in Rhode Island, southern Massachusetts, and eastern Connecticut. Both the physical and social environement of Rhode Island favored the rapid expansion of the new industry. Abundance of cheap water power was a major factor for even small streams could be used, since rainfall was evenly distributed throughout the year. The topography, or the shape and contour, of the land created,along the small streams,many ponds where water was stored naturally, to be used in turning the water wheels of the mills, for which only a trench had to be dug to send the water against the wheel. Furthermore, the water of the streams was pure enough for successful spinning, and the nearness of the mill sites to the seaboard made it easy to import the raw materials and to ship away the finished product.

The hill farmers of the state, who were cultivating land too poor to yield a living, except in good times, provided the initial labor force in the mills. Soical conditions also favored industrialization. The pioneer manufacturers benefited especially from an unusually congenial climate of public opinion. The general acceptance of employing women and children in factories, as well as the supply of employees from hill farms, provided an inexpensive labor force.

There was one other advantage enjoyed by the mill owners. Ever since the first days of the Rhode Island colony, settlers had proven to be ingenious about making for themselves furniture, farm tools, and mechanical devices. They had developed an inventive, knowledgeable attitude toward machinery and its use, and they had become skilled artisams. Because of this, they turned naturally toward the operation of the machinery of the early mills. Much later, someone commented that the most valuable natural resource Rhode Island had was the mechanical skill of its people.

Cotton spinners and weavers, saw and grist-millers, tanners, coopers and iron-workers, shoe-makers and candle-makers, charcoal burners and all manner of workers in wood, had by 1800 come to constitute that reservoir of skills and experience essential to the successful launching of large-scale industrial experimentation.

1. Can you imagine yourself at your age now working 14 hours a day 6 days a week.

How long could you work at any specific task?

2. What made Rhode Island a favorite place for early manufacturers. to develop? List at least three factors.

3. Did Samuel Slater later live up to his early promises?

4. Can you contrast the description of the life of mill hands and living conditions in the 1800's with our times?

5. How did public opinion justify the hiring of child labor?

6. Why was there a need for a cotton spinning industry?

7. Where did the workers come from?

8. How was the geography of R. I. well suited for mills?

9. Discuss apprenticeship - Do you think anything like this exists in education now? Do you think some students would achieve better skills and education if this system or a modification of this system were true today?

10. One of the articles speaks about the R. I. rivers and streams being pure enough for bleaching purposes. Could a person say this today of our R. I. streams and rivers.

1. What was needed to build a successful spinning mill?
2. What was a water frame?
3. What was a spinning jenny?
4. What was needed as a site for a successful mill?
5. What types of mills had been operated in early New England long before 1790?
6. How did the mill obtain its power?
7. What were some of the difficulties of the first mill? How were they improved?

VISIT

Slater Mill

Gilbert Stuart Mill

Museum of Early Rhode Island Skills

PROJECT

Construct a model of a mill.

Diorama of the mill site- streams, falls, pond.

Construct a water wheel.

Map principal mills in Rhode Island with streams.

Should explain elevation - rivers - rain fall.

Maps of sources of imports, ships courses and market for finished products.

Early Life of Samuel Slater:

Born in Derbyshire, England, June 9, 1768 second son of a wealthy farmer

Intense interest in mechanical things at an early age

Father decides to apprentice him to Jedediah Strutt, owner of an Arkwright Mill on the Derwent River

Death of father in accident

Indenture papers were drawn up, and at the age of fourteen Samuel began his apprenticeship, to be completed in seven years

Samuel worked hard and never lost his interest in machinery all his life

During his training Mr. Strutt took him to see a Steam-powered factory in Nottingham. Samuel was so upset by the awful working and living conditions on the women and children in the city that he never forgot them

At the close of his apprenticeship he was aware of the opportunities in the colonies, then newly independent

He was convinced that the United States was the place to go

He planned carefully for his departure. Since he was a farm boy he could easily dress and act as a farm laborer

England was jealous of her place in world trade, and refused to allow plans for textile machines to be exported, and mechanics trained in their use were forbidden to leave the country

Slater's friendship on the ship with a young sailor named Job Markham led Slater to Job's uncle, a captain on a coastal packetship

Captain Curry told Samuel of the need of skilled mechanics in Rhode Island and suggested he write to Moses Brown, a wealthy Quaker

Brown and his partners had invested in a spinning machine which had not proven successful

Slater wrote: "... Cotton spinning,... in which business I can give you the greatest satisfaction, in making machinery as good as any that is made in England, as I have had opportunity and oversight of Sir Richard Arkwright's works."

The reply from Moses Brown came - "Friend - Received thine of the 2nd instance... Almy and Brown want the assistance of..."

Slater sailed to Providence with Captain Curry in The Pride of Providence

Contract drawn up, his introduction to the Wilkerson family

Months of hard work trying to adapt the machine there and finally drawing his own plans from his memory of the Arkwright design

Mill opened at Pawtucket Falls on December 20, 1790, with four boys twelve years of age as workmen

The mill was successful in making the kind and quality of yarn needed

Business expanded to other mills in rapid succession

Slater insisted on large airy factories with many windows and he made safety rules for the workers

Slater introduced Sunday schools for the education of his millhands

Taught the class himself until Pawtucket assumed responsibility

Slater planned an entire town as his efforts succeeded - it became Slaterville, and still exists

Slater made his home there with his family

Economic prosperity of Rhode Island in these years was due to the new cotton industry and the efforts of Slater,

By 1815 there were 38 mills in the state -

Slater received national recognition from President Andrew Jackson for his efforts in 1831

When President Jackson visited Pawtucket he called
Slater the "father of American Manufacturers

Slater Died in 1835

CHILD LABOR IN RHODE ISLAND

The early mills employed child labor extensively. As early as seven years of age, a child entered the mills working a fourteen-hour day and a six-day week.

Samuel Slater had seen in his apprenticeship in England deplorable conditions among the child workers - slum housing, unsafe working conditions, families of five or six living in one windowless room in filth and disease. He determined not to have these conditions in his new mill. He insisted that the building be large, airy, and sun-lit, and that proper housing be built if necessary for the mill homes. He started the first Sunday school for the workers, not as a religious school but for their regular education. He taught it himself until he could convince the authorities in Pawtucket to hire a school teacher. He opened his first mill for boys of twelve or under.

In 1906 an item in the Providence Sunday Journal gave this information about employment in Rhode Island cotton mills in 1835.

Children of 7 years of age and up, $.50 a week maximum.

Spinners	$2.00 to $2.50 a week
Weavers	$3.00 to $5.00 a week
Overseers	$6.00 to $7.50 a week

Not all mill owners were as thoughtful as Samuel Slater about the conditions in which their employees worked and lived, many manufacturers allowed serious health problems to exist. Slimy wastes drained from tanneries and slaughter houses into stagnant, smelly pools. Pigs fed on refuse in distilleries' cellars and yards. Factory workers were crowded into un-sanitary and teeming tenements, and worked long hours under dangerous conditions. Congested areas suffered from inadequate drainage facilities, and impure water supplies. There were many outbreaks of yellow fever.

Yet the General Assembly did not authorize local authorities to regulate industrial nuisances until 1843. Another eight years elapsed before town councils could zone slaughter-houses. The Assembly was not perturbed by the high incidence of child labor, nor by unhealthy factory conditions. It took no action at all until 1850, and even the law was notoriously ineffective.

The traditional Rhode Island suspicion of idleness encouraged manufactures to hire children in the belief that work conferred positive moral, social, and economic benefits upon the child, parent, and employer alike. Thus the local press defended the system with the argument that "honest labor is much better than the most romantic indolence."

Not even the mill started by Slater avoided such conditions. A visitor thought that tending machinery dulled the spirit, but the misery of an overflowing and unemployed population was even more fearful. It was better to be overworked, asserted one editor, that to "pine in sloth, rags, and wretchedness."

With public approval, Rhode Island mill owners continued employing children long after most American manufacturers had discontinued the practice. In the industrial view, economic no less than moral necessity justified child labor.

OBJECTIVE I: The student will be able to state the reason for the rise of industrialization in Rhode Island.

ACTIVITIES:

1. Discussion: Imagine life after the War for Independence
    a. The loss of trade with Great Britian
    b. No manufactured goods for the people (no shopping plazas)
    c. How were people going to get the things they needed? Make them. How were they to make enough for everyone? Mass production in factories. Lack of existing industrial facilities created the need for industrial development.

EVALUATION: The student will state the reason for the rise in industrialization in Rhode Island.

OBJECTIVE II: The student will be able to state the problems that faced the people concerning the beginning of an industry.

ACTIVITIES:

1. What will be the source of power?-- water
2. Where: Make a map of Rhode Island. Find the places which would provide the source of this power. Discuss the findings with the class in locating good sites for industrial developement. Other factors to consider: availabiltiy of labor, raw materials, transportation etc.
3. How: What will they manufacture with? machines
    a. Attempt made to copy English machines failed.
    b. England had laws aganist the export of models and plans of its machines.
    c. Local invention - not to successful

EVALUATION: The student will state the problems that faced the people concerning the beginning of an industry.

OBJECTIVE III: The student will be able to state the role of Samuel Slater in Rhode Island industrialization.

ACTIVITIES:

1. Make a notebook entitled "Industry in Rhode Island".
2. Research the life of S. Slater and put in notebook.
3. Discuss his role in the beginning of R.I. Industry.
    a. Familiarity with the Arkwright frame.
    b. What is the Arkwright frame and why was it important?

4. Discuss how the industry grew over the next 20 years.
5. Visit
    a. Slater Mill
    b. Gilbert Stuart Mill
    c. Museum of Early Rhode Island Skills.

EVALUATION: The student will state the role S. Slater played in Rhode Island industry.

OBJECTIVE IV: The student will be able to state how the environmental conditions, physical and social, favored the rapid expansion of the new industry.

ACTIVITIES:

1. Discussion of what was needed for the new industry.
    a. Cheap power - abundance of water power.
    b. Climate: abundant and consistant rainfall, sufficient humidity for successful spinning.
    c. Materials: sites near enough to the coast made it easy to import materials.
    d. Market site near the coast made it easy to export finished goods.
    e. People could not make a living by working the land, they were glad to work in a factory. Women and children also provided cheap labor.
2. Make an illustration showing the five favorite conditions.

EVALUATION: Given the headings of POWER, CLIMATE, MATERIALS, MARKET, & PEOPLE TO WORK, the student will state how these physical and social conditions favored the rapid expansion of the new industry.

OBJECTIVE: The student will be able to describe the contrasting working conditions which existed in Rhode Island in the 1830's.

ACTIVITIES:

1. Discussion:
    a. Child labor began at age seven, top pay 50¢ a week, 14 hours a day, 6 days a week.
    b. Health Problems
        1. Small factories crowded with people
        2. Machinery unsafe, working conditions dangerous, the people had to work long hours and were operating machinery while tired
        3. People lived in crowded tenements
        4. Industrial wastes drained into stagnant pools.
        5. Impure water supply, much yellow fever
    c. S. Slater Mills
        1. Were large and airy

    2. Had decent houses for his workers
    3. Started school on Sunday to educate his workers
    4. Cut down on child labor

d. Make an illustration showing the conditions which existed in the Slater Mills and the contrasting conditions existing in the other mills.

THE ISLAND COUNTRY OF JAPAN

Problems to be solved

Objectives:

1. To learn how the island of Japan affects its people
    a. Where they live
    b. How they live
    c. How the land affects the farming
    d. How the type of land affects transportation

2. To learn how the Japanese climate affects the people
    a. Types and varieties of climate
    b. Differences between mountain regions and lowlands
    c. Adaptation of Japanese people to climate

3. To learn how modern, crowded Japan has become so prosperous
    a. Lack of raw materials
    b. Few resources, except for sea
    c. Food production
    d. Intensive use if limited farm land
    e. Problems they have overcome
    f. Japanese standard of living
    g. A great industrial nation with few natural resources
    h. Products produced

4. Transportation and communication
    a. Difficulties of railroad building
    b.. Train travel most important
    c. Good harbors

Research topics - six groups

1. Land features
    a. Mountains
    b. Earthquakes
    c. Rivers, lakes, inland sea

2. Climate

3. Ways of earning a living
    a. Agriculture
    b. Foreign trade
    c. Fishing

4. Transportation and communication

5. History
    a. Early history
    b. Foreign relations
    c. World War II
    d. Post - war period

6. Ways of life
    a. Food
    b. Shelter
    c. Clothing
    d. Religion
    e. Education
    f. Recreation

Vocabulary

earthquake
lava
Tokyo
boys' festival
shrine
kimonas
rice paddy
stone laterns
Shikoku
mulberry trees
cocoons
looms
Buddha
terraces
cultured pearls

volcano
Honshu
Dragon kite
carp
Obasan
chopsticks
soy beans
inland sea
tea farm
silkworms
textiles
picture-word writing
thatched roofs
Shintoism
silk screens

Activities

1. Make charts of
2. Make relief map with colored pins showing large population and great fishing centers
3. Plan a Japanese festival for the class
4. Make Japanese kites
5. Collect pictures of Japanese art
6. Read Haiku, and write your own Haiku poem
7. Plan a Japanese dance
8. Make a miniature bonzai garden
9. In a group, study and create Japanese flower arrangements
10. Act out a Japanese tea ceremony
11. Construct a Japanese house
12. Plan a diorama of a Japanese hillside garden
13. Present a display of Japanese products

14. Make a collection of Japanese fans
15. Research Japanese manners and customs in the home
16. Plan a mural with Japanese temples and mountains in the background
17. Read Japanese folk tales and dramatize one for the class
18. Collect or dress Japanese dolls for displays
19. Plan a Japanese meal to be served as the Japanese would

Evaluation

Students should be able to state

1. Problems of Japan, an island country
2. How the land, climate, and resources affect the living
3. Their understanding of the difficult adjustments made because of these conditions
4. Their appreciation of the industry and ingenuity of these people in achieving a thriving modern industrial society

Bibliography

LIVING IN OUR COUNTRY AND OTHER LANDS, MacMillan
CHANGING EARTH AND ITS PEOPLE, Allyn and Bacon
JAPAN AN ISLAND COUNTRY, (A unit by Virginia Wright)
BRITANNICA JUNIOR STUDY GUIDES

Children's Bibliography

BIG WAVE, Pearl S. Buck. John Day, 1948
ONE BRIGHT DAY, Pearl S. Buck, John Day, 1950
A TALE OF YOKOHAOMA, Lucy Crockett and Term Herndon. Henry Holt, 1950
THE PAGEANT OF JAPANESE HISTORY, M.M. Dilts. Longmans, Green, 1947
JAPAN IN STORY AND PICTURES, Lily Edelman, Harcourt, 1953
JAPANESE FAIRY TALES, Lafcadio Hearn and others. Liveright, 1924
GOZO's WONDERFUL KITE, W. Ryerson Johnson, Crowell, 1951
HOMEMADE DOLLS IN FOREIGN DRESS, N.R. Jordan. Harcourt, 1939
WHERE THE CARP BANNERS FLY, G.W. McGavran. Friendship Press, 1949
FIRST BOOK OF JAPAN, Helen Mears. Franklin Watts, 1953

JAPANESE CHILDREN, Mabel O'Donnell, Row Peterson, 1951

THE DANCING KETTLE AND OTHER JAPANESE FOLK TALES, Yoshiko Uchida. Harcourt, 1949

Bibliography

Brittanica Junior Study Guide

Living in Our Country and Other Lands, pp 120-161, MacMillan

Learning to Look at Our World, pp 156-179, Silver Burdett

Changing Earth and Its People, Allyn and Bacon

Hot, Dry Lands

Objectives

1. To learn where the desert zones are and what countries lie within this belt.
2. To appreciate the effect of the climate on the life of the people living in that zone.
3. To find out the effect the climate has on plant life and animal life.
4. To find out the effect of sun on climate of this zone.
5. To learn how people live, what they eat, and what they wear.
6. To understand the simplicity of life in these countries.

Vocabulary

Sahara
dunes
Date palms
Allah
camels' hair
caravan
couscous
bazaar
irrigate
gazelle
Kalihari
Arabs
water buffalo
White nile
Bedouins
minerals
Koran
fellahin
Nile River
nomads
camels
goat-skin bags
burnooses
sheik
oasis
sand storm
yurt
silversmith
bushmen
mongol
Berber
delta
Blue Nile
mosque
Islam
Pharoah
pyramids

Research Topics

1. Temperatures in desert-quick changes
2. Clothing worn in desert
3. Desert homes
4. Oasis homes
5. Crops of the desert
6. Importance of date palms
7. Sources of water in the desert
8. Schools for Arab children
9. Traveling in the desert
10. People of the desert
    a. Berbers
    b. Bedouins
    c. Bushmen
11. Ways of living in Egypt
12. The Nile Delta
13. Egypt - the world's largest oasis
14. Food of the desert people
15. Religion of the desert people
16. Art of the Moslems
17. Ancient Egypt
18. Planting, plowing, and harvesting in ancient Egypt
19. The Pharoahs
20. Tombs along the Nile
21. Rich and poor in ancient Egypt
22. Work of the scribes
23. Life along the Nile Today
24. New cities and new travel in Egypt

25. New dam at Aswan
26. Oil beneath the desert
27. Things of the desert that never change
28. Art of Oriental rugs

Activities

1. Construct a house of a nomad in the Sahara
2. Construct the house of a nomad in the Gobi desert
3. Report on the life of an Arabian boy, his work, his play, his school, his food
4. Report on the life of a boy on the Gobi desert, his work, his play, his school, his food
5. Plan an oasis bazaar
6. Find out how to make couscous
7. Plan a meal of an Arabian family
8. Make a product map of the desert lands
9. Dress dolls of the Arabian and Gobi deserts
10. Write a story about an imaginary journey to an oasis with a sandstorm coming up
11. Report on why the camel is called the ship of the desert
12. Make a collection of Arabian products - brasses, rugs, dishes, scarves, slippers
13. Make a diorama of an oasis
14. Construct a pyramid

Bibliography

LET'S GO TO THE DESERT, Harriet E. Huntington, Doubleday
BOY OF THE PYRAMIDS, Ruth F. Jones

Films and Filmstrips

Encyclopedia Brittanica Films
  Mediterranean Africa
  Arabian Bazaar
  Wanderers of the Desert
  Life in the Sahara
  Desert Nomad
  Irrigation Farming

Evaluation

Has the child learned

1. How people live in desert lands
2. How people travel in the desert
3. The effect of climate on people's living habits
4. The plant life of the desert
5. Animal life in the desert
6. Why a simple life must be lived there

LIVING IN THE COLD LANDS

Objectives

1. To learn about the location and climate of cold lands
2. To understand how climate and geographic location affect plant and animal life
3. To know about food, clothing, and shelter of people of the far north
4. To appreciate the affect of cold lands and seasonal changes upon life in the cold lands

Reading Outline

1. Where are the frigid zone territories?
2. Where are the Arctic and Antarctic regions?
3. Describe the lands in the Arctic Circle.
4. Describe Eskimo art.

Vocabulary

glacier
tundra
Lapland
reindeer
iceberg
Titanic
igloo
huskies
polar bear
lead dog
cache
seal hole
trading posts

permafrost
Eskimo
caribou
kayak
International Ice Patrol
blubber
harpoon
cooperatives
midnight sun
blizzard
wolverine
sinew
penguins

Topics to Research 2

1. Fish and water mammals in the Arctic region
    - Cod
    - Seal
    - Walrus
    - Whale

2. Climate and people and industries of Greenland
    - Arctic region
    - Eskimo
    - Fisheries
    - Glaciers' effect on animal life
    - Greenland
    - Icebergs

3. Lapland
    - How do people live in Lapland?
    - Natural resources of this country

4. Iceland
    - Read about Icelandic culture

5. Siberia
    - Climate in Siberia

6. Plant life in the cold lands
    - Alaska
    - Arctic Regions
    - Finland
    - Iceland
    - Siberia

7. Natural resources of cold lands
    - Alaska
    - Arctic Regions
    - Iceland
    - Lapland

8. Eskimos and Alaska

9. Famous explorers of the frigid zones
   Amundsen
   Vitus Bering -
   Richard E. Byrd
   Sir Wilfred Grenfell
   Donald MacMillan
   Robert E. Peary
   Sir Ernest Shackelton
   Vilhjalmur Stefansson

10. Discuss present-day explorations

Activities

1. Make a pictorial map of the Arctic and Antarctic regions
2. Pretend you are starting out on a Polar Exploration. List the things you'd need to take
3. Pretend you are on a visit to an Eskimo family. Write a letter home telling what you and your hosts did on one day.
4. Collect pictures of Arctic and Antarctic scenery.
5. Write a play about Eskimo life.
6. Dress an Eskimo doll.
7. Make a miniature Kayak.
8. Build an igloo, using styrofoam.
9. Find pictures of the clothing of the Lapps and the Eskimos.
10. Plan an art lesson using designs from the cold lands.

Extra Reading

THE TALKING TREE, Desmond, A.C., Macmillan, 1949

CRUISE OF THE JEANNETTE, Ellsberg, Captain Edward, Dood, Mead, 1949

THE FIRST BOOK OF ESKIMOS, Elting, Mary (Brewster, Benhamin pseud.) F. Watts, 1952

SKOOKUM, Evans, E.K.,Putman, 1946

ESKIMO BOY, Freuchen, Pipaluk (Translated from the Danish) Lathrop Lee and Shepard, 1951

TOP OF THE WORLD, Gall, Mrs, Alice (Crew) and Crew, Fleming H., Oxford, 1939

BEYOND THE CLAPPING MOUNTAINS, Gillham, Charles Edward, Macmillan, 1943

THE ESKIMO HUNTER, Hayes, Florence Sooy, Random House, 1945

SLED DOG OF ALASKA, London, Jack, Dodd, 1953

KAH'- DA; LIFE OF NORTH GREENLAND ESKIMO BOY, Macmillan, Donald Baxter, Doubleday, Doran, 1930

KUDLA AND HIS POLAR BEAR, Macmillan, Miriam, Dodd, 1953

SILVER CHIEF DOG OF THE NORTH, O'Brien, John S., Winston, 1953

THE EAGLE'S GIFT, Rasmussen, Knud J., Doubleday, Doran, 1932

Films

ALASKA, for middle grades and high school - Encyclopedia Britannica Films

ESKIMO CHILDREN, for primary and middle grades - EBF

LAPLANDERS, for middle grades - EBF

Filmstrips

ALASKA, middle grades and junior high - EBF

ESKIMO CHILDREN, primary and middle grades - EBF

Evaluation

The student can

- Locate cold lands
- Description:
- Climate
- Living conditions
- Plant and animal life

The student should realize

- Simple life
- Problem of food and shelter in extremely cold climate
- How people of far north adjust to their environment
- The foremost explorers
- Hardship of exploration
- Equipment necessary

CHAPTER III

SCIENCE

The American Association for the Advancement of Science Program (AAAS), "Science-A Process Approach", published by the Xerox Corporation, forms the basis of the science approach in this curriculum guide.

SCIENCE

The science curriculum for the gifted should expand the teaching of science from a collection of facts to a dimension where students can question, doubt, observe, examine and explore their environment. The science experiences of the students should contribute to the attainment of 2 major goals:

1. The ability to use the scientific method of problem solving.
2. The development of scientific skills and understandings.

The curriculum should offer fact finding methods by which the students search for answers by obtaining information and by gathering data and evidence related to their specific problems.

Appropriate growth and habits are promoted in children by science experiments which involve the care of equipment, preparations, use, proper handling and cleaning of materials, keeping accurate records of activities, and sharing data and supplies with others.

The program should provide the necessary training for young children to develop into accurate observers who respect each other's point of view and consider many factors before drawing conclusions.

A basic tenet of elementary science teaching should be an attitude of inquiry based on facts and principles. The AAAS program offers discovery experience based on predetermined concepts, but also instills attitudes and behaviors involving students to cope with problems of their environment. (Diagram #1)

The program provides an opportunity for individual study and project work for the student with specialized interest in some particular phase of science. These activities will further involve the students directly with the concepts and processes of science and link their innate curiosity with action, making science learning and scientific discovery an exciting experience. (Diagram #2) The individual pupil will be encouraged to observe, analyze, experiment, and to think carefully and critically for themselves. This will help develop leadership qualities and an understanding of what science is and how to employ their skills as a scientist. The gifted science program will encourage individual and group projects of such a nature that the students will feel genuine satisfaction with their work. (Diagram #2,3)

The science program for the gifted should provide opportunities for self expression and correlation with other subjects in the curriculum. (Diagram #1) There should be no boundaries between the subject areas. Ideas flow from each area and transcend subjects. Where creative expression is permitted the learner tends to select his own activities to provide continuity of experiences. Continuity is an internal as well as an external affair. Gifted children should help plan scientific programs for their benefit.

Science lends itself readily to creative expression in other areas, and should be interwoven with mathematics, creative writing, social sciences, art, drama, manual skills and music.

Creative thinking embodies an opinion in the thought process. The freedom to ramble mentally and make associations. (Diagram #1)

Science is more than a body of facts and principles, it is an organized method of asking and answering questions. (Diagram #3) The processes of scientific inquiry are learned not as a set of rules, but as a way to find answers. The students are active participants. They work as scientists by carrying out the tasks that scientists perform.

The course consists of about 20 excersises designed to last about 30 to 50 minutes. This gives the student a scientific basis but allows ample time for other activities in the science program.

The teacher should use "The Commentary For Teacher" and Hierarchy chart to plan and coordinate the Science A Process Approach Program. The teacher may present one activity a week or several in one week. Keeping the science curriculum flexible and integrating it with other disciplines it is suggested that approximately 3 hours per week be spent on science activities.

Each activity in the science process program is designed so that it can be performed by individual students on a continuous progress basis. However, it is felt that there may be more gained by working in groups of 4 or 5 children. This would facilitate an interaction between students. Teaching them to work together, exchange ideas, see that there may be several ways to doing a takk, evaluate each other ideas, and learn to respect the ideas of others. This method also affords an opportunity for leadership development. The development of critical thinking occurs best in a atmosphere of interstimulation between superior minds who can challenge, question, and evaluate each other.

The basic science program for the gifted is one in which the pupils will study the same topics that boys and girls in regular classes might study. However, the gifted will be expected to delve more deeply into the various topics. (Diagram #2,3)

There is no text in the science curriculum because reading about science is not enough. Pupils learn by doing, through observation, comparison, analyzing fact, interpreting, and generalizing.

Science - A Process Approach has been chosen as the basic science course for the gifted. In this process approach the complex skills that a scientist uses in conducting a scientific investigation are broken down into a number of processes which must be mastered in order for the learner to develop a sound knowledge of science and its methods. The basic processes of science are identified by the following terms:

1. Observing
2. Using space time relationships
3. Using numbers
4. Measuring
5. Classifying
6. Communicating
7. Predicting
8. Inferring

The principal aim of the program is to develop skill in the careful and systematic use of these processes, and to correlate them with the other disciplines of math, social studies, and creative writing. (Diagram #1,2,3)

The students will also learn the following more complex integrated process skills (1) Interpreting data, (2) formulating hypotheses, (3) controling variables, (4) defining operationally, (5) experimenting.

The scientific content of the course is drawn from the physical, biological, and behavioral sciences. Scientific facts, laws and theories of natural phenomena are introduced into the overall framework. However, the major intent is to facilitate the development of the scientific processes which underlie discovery and the continuing development of scientific knowledge.

List of Broad Understandings
Suggested for study

1. We live at the bottom of a turbulant "Ocean" of Air that surrounds the earth.

    a. Weather change
    b. Wind system
    c. Flight of birds, insects and mammals, airplanes
    d. Ascent of ballons
    e. Cloud formations
    F. Air pressures
    g. Sound

2. The earth on which we live is part of Sun-Planet-Satellite System which is part of a galaxy - one of an untold number of galaxies in the universe.

    a. Daily path of the sun across the sky
    b. The change in position of the rising and
    c. Changes in position and phases of the moon.
    d. Movement of planets across the sky
    e. Movement of constellations

3. Our bodies are similar to the bodies of other animals in many ways.

    Comparative studies of animal systems ingestestion, digestion (breathing) coordination, reproduction (set up relationships-classify)

4. Substances from the earth and the atmosphere circulate through the bodies of living things.

    a. Interdispusion of matter (solutions, suspensions)
    b. Changes of phase (solid, liguid, gas)
    c. Change in composition of the atmosphere
    d. Chemical changes
    e. Osmosis and diffusion

f. Photosynthesis and respiration

g. Food chains

h. Decay

ACTIVITIES

The following is a partial list of activities which may be performed by the students. The teacher and the students should decide which activities will be performed depending on the special interest of the student or groups of students. Activity (1) should be carried on by all students.

1. Perform all of the activities in Science-A Process Approach Part D.
2. Supplementary Reading
    A. Science Books
    B. Biographies of scientist
    C. Science fiction
    D. Magazine on science
    E. News articles on science
3. Prepare a science bulletin board.
4. Prepare plays about famous scientists or discoveries.
5. Have a class science fair.
6. Carry on individual research projects in field of special interest.
7. Plan and present to the class an experiment to prove an hypothesis developed by an individual or group.
8. Develop a science question of the week, "I Wonder Why".
    A. Post bulletin board
    B. Brainstorm
    C. Have students research answer
9. Collect, organize, and classify objects seashell, insects, leaves, rocks. seeds, fossils etc.
10. Make and take care of an Aquarium. Study habits of fish.

11. Make and take care of a Terrarium
    A. Classify plants
    B. Study how plants live

12. Keep and care for small animals such as white mice, gerbels, guineapigs
    A. Study habits of animals
    P. Read about animals
    C. Write stories about animals, true and fiction
    D. Keep chart and graph of animal weight and size

13. Take field trips, basis for discussion and creative writing
    A. Planetarium
    B. Study animals and plants in area or local zoo
    C. See a polluted area
    D. Research laboratory
    E. Local factories
    F. Museums

14. Guest speakers from community

15. Use scientific TV programs as a basis for discussion and writing, art
    A. Space shots
    B. Educational TV
    C. Other science programs

16. Study problems of society and the environment
    A. Pollution of air, river, etc.
    B. Population and land - (combine with math)

17. Draw up lists of phenomena to be explained (by pupils)
    A. Arrange in order for study
    B. For Hypothesis
    C. Carry out experiments
    D. Give mathematical description when possible

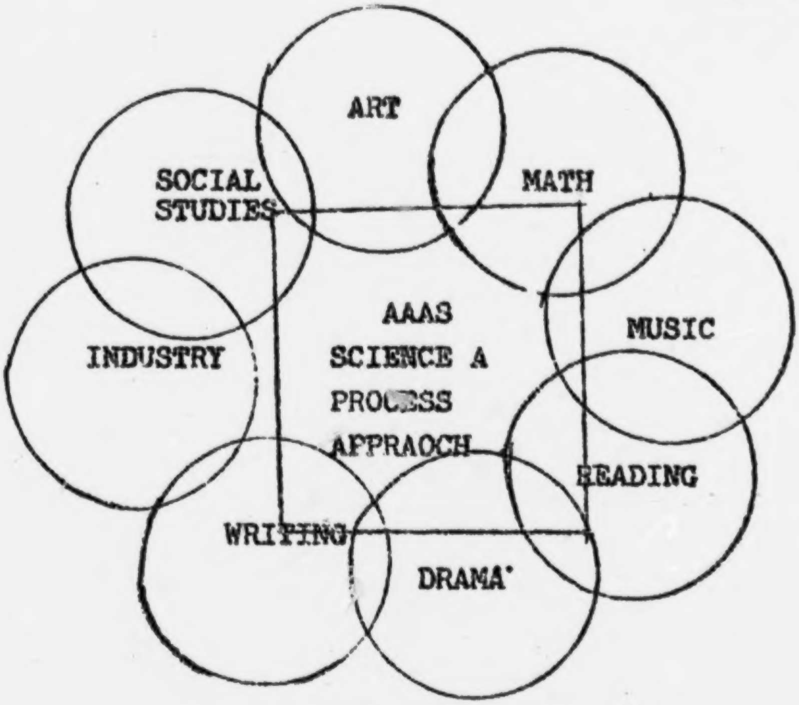
18. Form science clubs for groups with a common specialized interest - astromony - geology - etc.

19. Make charts and graphs of weather in area

20. Have a daily class mystery box (sense and tell)
    A. Examine to develop skill in observation and measuring
    B. Describe to class and classify
21. On the spot science questions and activities-short 5-10 min Science problem from ("Science and Children")
22. Use of natural metaphores in creative writing
23. Compare similarities and differences among various animals
    A. Classify
24. Compare similarities and differences among plants
    A. Classify

AAAS Science overlaps and contributes to other major disciplines and may be used to stimulate growth in the other areas.

Diagram # 1


ART
SOCIAL STUDIES
MATH
AAAS SCIENCE A PROCESS APPRAOCH
MUSIC
INDUSTRY
READING
WRITING
DRAMA

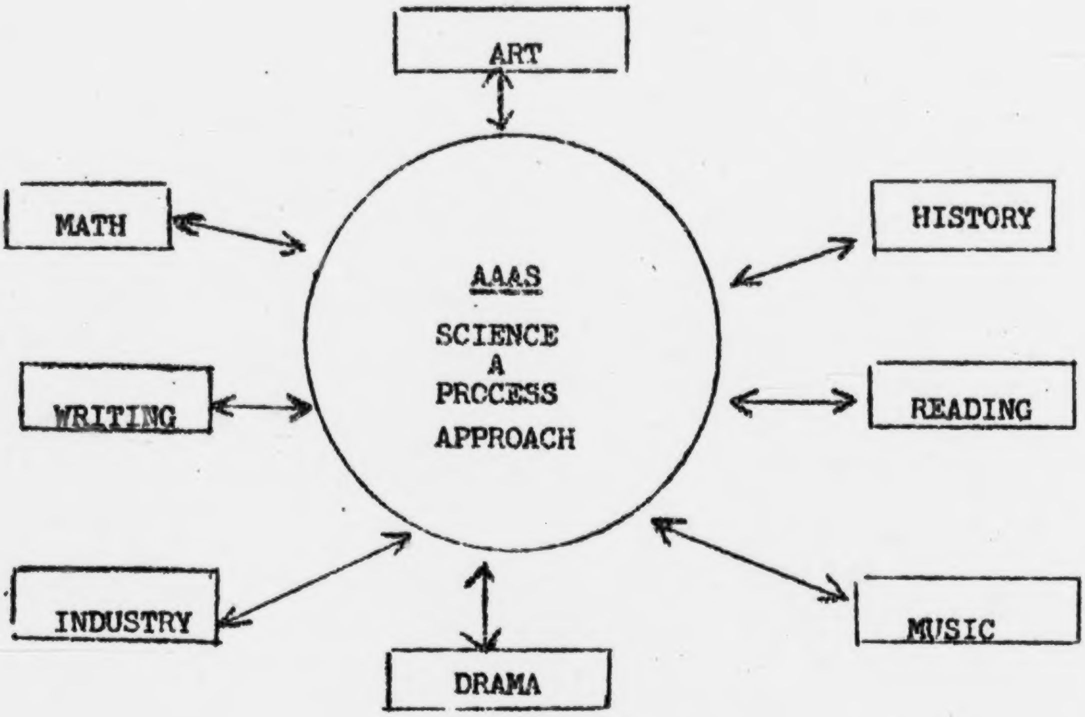
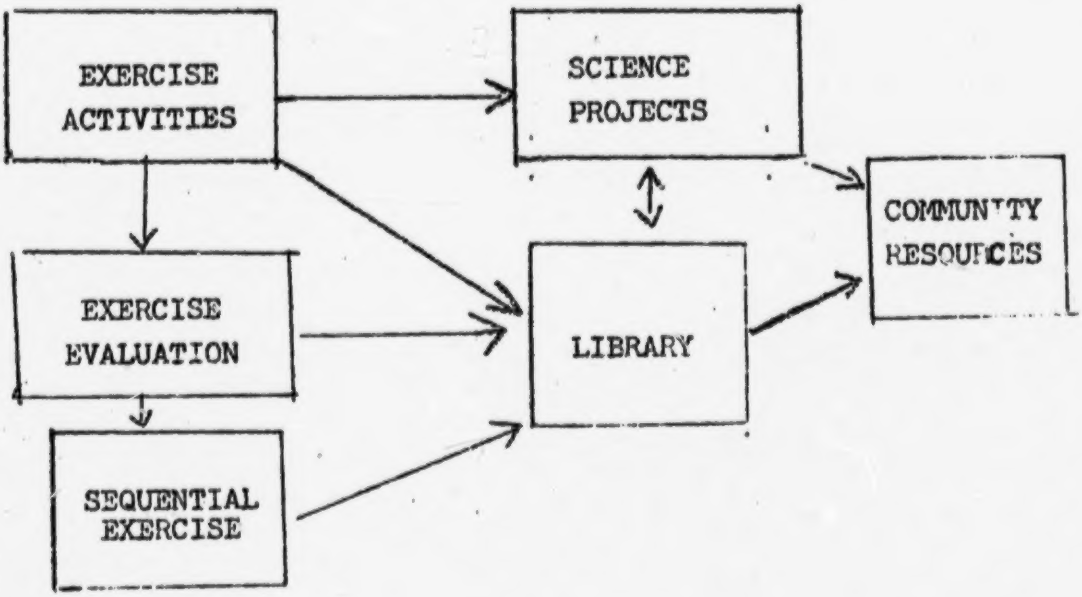

ART
MATH
HISTORY
AAAS
SCIENCE A PROCESS APPROACH
WRITING
READING
INDUSTRY
MUSIC
DRAMA

Diagram #2


EXERCISE ACTIVITIES
SCIENCE PROJECTS
COMMUNITY RESOURCES
EXERCISE EVALUATION
LIBRARY
SEQUENTIAL EXERCISE

The science activities should stimulate the use of books in the library as well as in the classrooms.

The library at the gifted center has 660 volumes on science. There are 394 different titles in the areas of pure science, and 212 titles in the areas of applied science.

Diagram #3

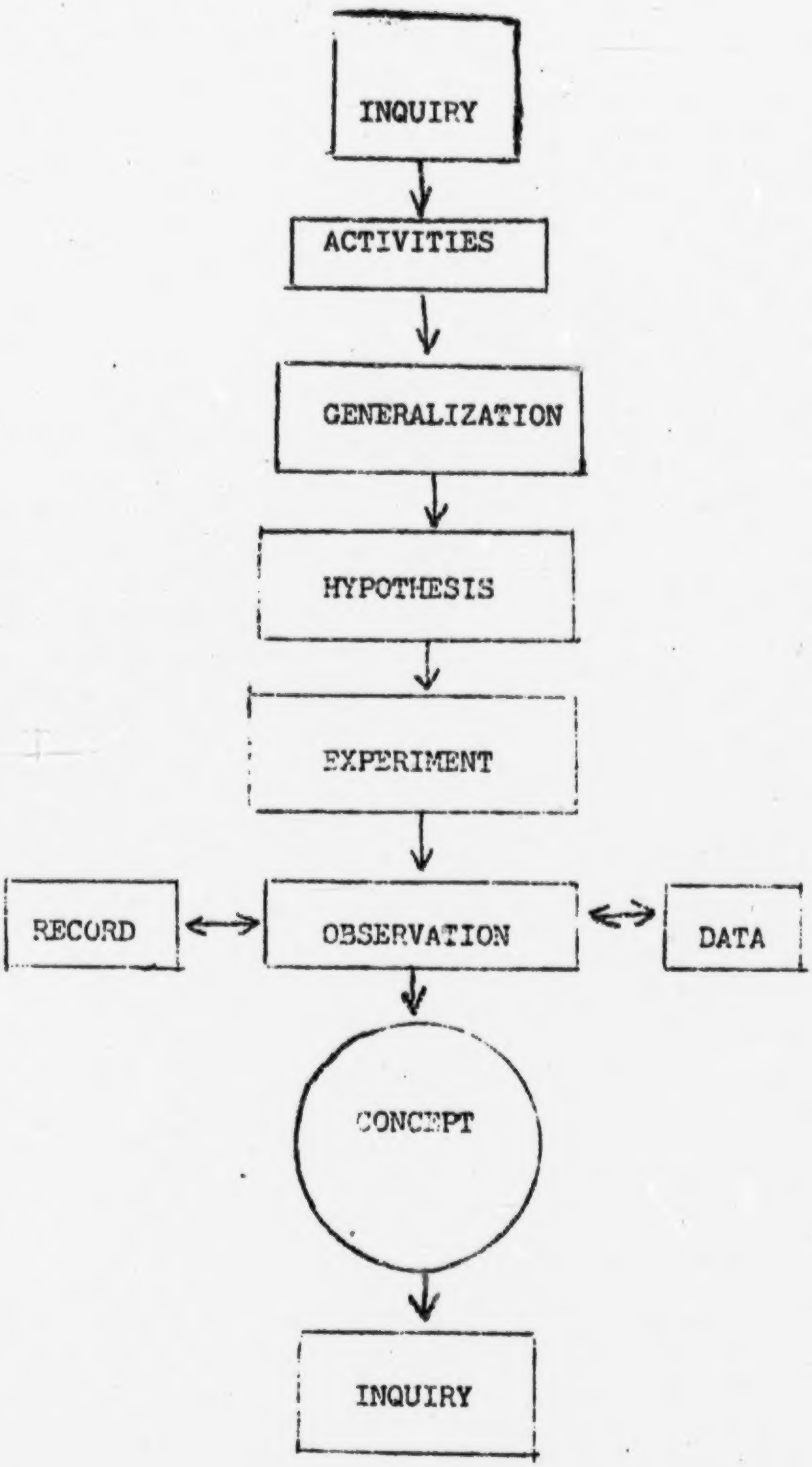
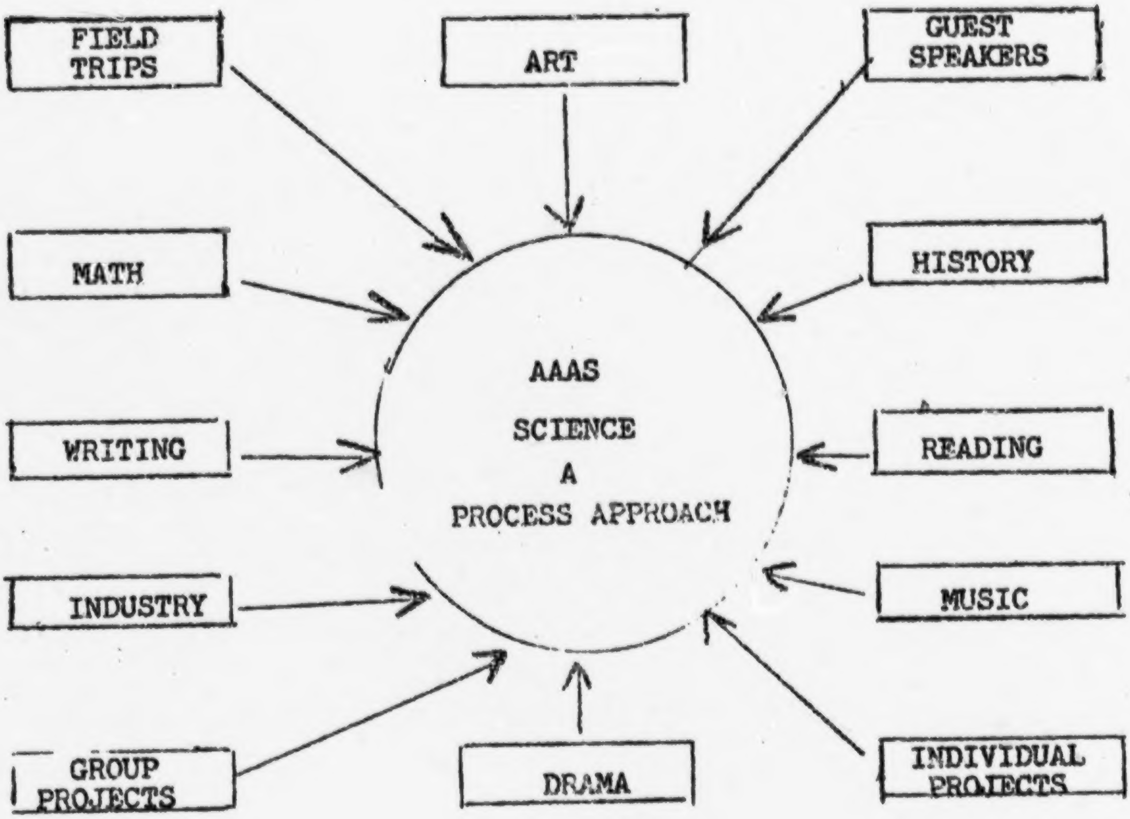

INQUIRY
ACTIVITIES
GENERALIZATION
HYPOTHESIS
EXPERIMENT
RECORD
OBSERVATION
DATA
CONCEPT
INQUIRY

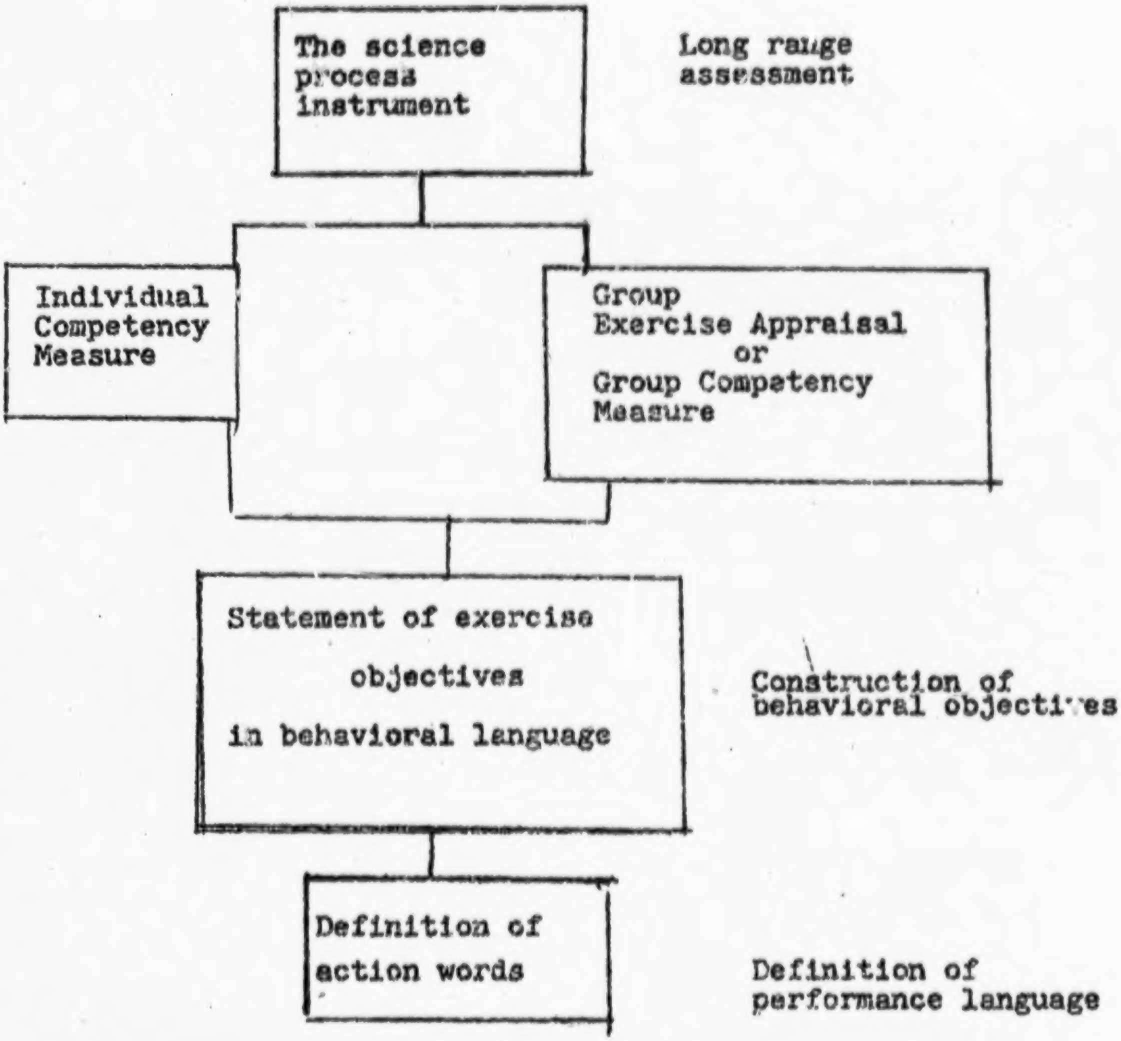
Diagram #4


FIELD TRIPS
ART
GUEST SPEAKERS
MATH
HISTORY
AAAS
SCIENCE
A
PROCESS APPROACH
WRITING
READING
INDUSTRY
MUSIC
GROUP PROJECTS
DRAMA
INDIVIDUAL PROJECTS

The curriculum encourages projects of an individual and group nature, and should be enriched by field trips and guest speakers.

Diagram # 5

SUMMARY OF OVERALL EVALUATION STRATEGY


The science process instrument
Long range assessment
Individual Competency Measure
Group Exercise Appraisal or Group Competency Measure
Statement of exercise objectives in behavioral language
Construction of behavioral objectives
Definition of action words
Definition of performance language

Extensive evaluation materials are an essential part of the curriculum. Each exercise contains clearly stated objectives, phrased in terms of pupil behavior, and the means for testing pupil achievement in relation to stated objectives.

From page 19 Science-A Process Approach Commentary for Teachers.

EXERCISE	ASSOCIATED SUBJECT	ASSOCIATED ACTIVITIES
a. Inferring 7 connection patterns in electric circuits	History - Light - Electricity	Morse code - Radio - TV - Plays Bell Telephone Science Kits. Most electrical kits may be purchased at Radio Shack for under $4.00 or most discount stores.
b. 1. Controlling Variables Rolling Cylinders	Math (Geometry) metallurgy, metric system, time, English	Inclined plane, inertia Prepare for soap box derby, toy or full size.
c. 2. Controlling Variables Upward movement of liquids in materials	Math, metric system, data, time. Ecology, Agronomy	Chromatography experiments (capillary action, soil and ecology studies-Science and Children 12-68 page 11)
d. 1. Interpreting data Guinea Pigs in a maze	Animal care, (Biology) maze construction-measuring (math) Psychology (learning) Rates - animal training Graphing, recording data	Make a mazian room for children and compare their learning when blind folded. Animal training - police dogs Make desk mazes Animal nutrition studies

EXERCISE	ASSOCIATED SUBJECT	ASSOCIATED ACTIVITIES
e. Using numbers 12 Decimals	Math-Decimal, metric system, protractor or measuring. Addition, sub., div., geometry Physical Education, time data, graphing.	Building, mechanical drawing, children time race's etc. Track meets. Toy auto race's.
f. Predicting 5 Prediction in various physical systems.	Graphs - plotting data, measuring, decimals, metric system, weighing Astronomy. Temperature °F and°C	Grandfather clock Read Pit and Pendulum Keep temperature daily on graph Visit planetarium Roger Williams Park or Brown. Make diagrams, models of solar system.
g. Inferring 8 Inferring the shape of cut things.	English, describing art and design Geometry - History pyramids Egyptian History	Have student cut figures out of wood or cardboard clay. Cut log and find age and parts of tree. Study of Egyptian pyramids
h. Classifying II Classifying materials	Identifying minerals, metals. Tie in with age of iron etc. in history Use of punch card.	Make a mineral collection - uses of metals. Visit a computer center, classify and make animal or leaf or plant collections.

EXERCISE	ASSOCIATED SUBJECT	ASSOCIATED ACTIVITIES
i. Interpreting Data 2 identifying materials	Punch card - chemical changes, data taking observing, testing chemicals around house. English	Visit data processing center. Research on computer. Use computer cards (obtained from Bell Telephone.)
j. Formulating Hypotheses 2. Conductors and non-conductors	Measuring heat, fire fuel. Discussion of fire safety, math - averaging data taking, graphing.	How to make matches. History of fire. Visit local fire department, list of good conductors and poor.
k. Formulating Hypotheses 1. Observation and Hypotheses	English Hypotheses in all related disciplines may be identified tested, and observed Not only scientific	Astronomy, electricity, metals, temperature
l. Defining Operationally 1. Electric circuits and their parts	Home safety and electricity, electric wiring, occupations, circuit breakers, uses Math, English, Art	Make lamps - radio crystal set etc. List of occupations which must know principals of house wiring. Common uses of circuit breakers around home community, thermostats, potentiometer, fuse.

EXERCISE	ASSOCIATED SUBJECT	ASSOCIATED ACTIVITIES
m. Defining operationally 2. Analysis of mixtures	Chemistry - English data taking definitions	Magnetism, evaporation. Study of weather, follow daily weather maps from paper. Ref: Science and Children 12-68 page 6
n. Measuring 17 Measurement of angles	Trigonometry - Measurements - Navigation of ship, space, water etc. History of compass Study of stars -Astronomy	Plot courses on maps, make a compass - Astronomy study, navigation. List of people who need to know how to measure angles. Make map of an area
o. Interpreting data 3. Precision in measurement.	Measuring - math(averaging) study of temperature and weather, English, graphing.	Space flight movies-need for accuracy in measurement. Study of weather.
p. Controlling variables 3. Growth of mold on bread.	Cytology - Meteorology Ecology-Social Studies and Irish imigration potatoe famine-math data taking, graphing, cheese and brewing countries.	Study history of Penicillium, grow various types of molds-make, a list of uses. Cheese manufacture and brewing industry. Student may bake bread-plant responses. Science and Children - 11-68
q. Controlling variables 4. Loss of moisture from potatoes.	Osmosis- weather Diffusion - Graphing	Study potatoe farming, nutrition study. What causes rain and snow. Humidity, visit weather station.
r. Communicating 13 Force and motion.	English - write and describe in math terms - art, perspective, diagram	Soap Box Derby - Toy, diagram. Space models. Study how muscles cause motion. Ref: Science and Children 11-68 page 32.

EXERCISE	ASSOCIATED SUBJECT	ASSOCIATED ACTIVITIES
s. Measuring 18, A unit of force.	English - math - graph history.	Units of measure in other countries History of weight etc. Study of Newton.
t. Using space time relationships 17, Rotation and angular speed.	Math, Astronomy, space , English music	Each motion of space ship, build models of space ships. Phonograph speeds, toy-Soap Box Derby. Toys may be purchased or made as models at hobby shops. Judging duration of time investigation. Ref: Science and Children 1-68
u. Interpreting data 4. Interpreting the field of vision.	Math decimals, graphing , measurement. Biology,art.	Build telescope, eye models, study of eye, microscope,use in diagrams of eye etc. Models may be purchased at hobby shops or most discount stores.
v. Defining operationally 3. Living things are composed of cells.	Biology - Cytology English - Art-Diagraming Pathology - detail drawing of what he sees.	Make slides-diagram cells,filmstrips movies, study cancer. Compare animal and plant cells,demonstrate how a microscope works. Examine pond water and classify and diagram organisms-History Robert Hooke drama play, make model of first sample microscopes
w. Using numbers 13, Large numbers.	Math, Astronomy,Chemistry, Biology, computers.	Astronomy, cells in human body, molecules and space.

Behavioral Objectives For Individual Units

a) Describing the expected outcomes of future observations based on inferences about electric circuits formulated and tested by the student.

Objectives:

1. Construct a complete electric circuit consisting of a flashlight cell, a lamp, and two wires.
2. Construct inferred connection patterns for hidden circuits.
3. Describe the expected outcomes of future tests based upon inferred connection patterns.

b) Identifying and naming variables related to an investigation of rolling objects.

Objectives:

1. Identify variables which might effect the time a round object takes to roll down an inclined plane.
2. Identify which variables were held constant during the investigation of the relative time a round object takes to roll down an inclined plane.

c) Identifying and naming the variables held constant and the manipulated variables in an investigation of the movement upward of liquids in materials.

Objectives:

1. Identify the variables that are manupulated in an investigation of the movement upward of liquids in materials.
2. Identify the variables that are held constent in a an investigation of the movement upward of liquids in materials.
3. Demonstrate that in some materials, a liquid moves upward faster than it does in others.
4. Demonstrate that in a given material, different liquids move upward at different rates.

d) Identifying data on a graph that support or refute an inferred relationship between two variables. Describing the changes in an animal's performance of a task which result from repeated trials.

Objectives:

1. Describe the changes in an animals performance of a task which result from repeated trials or practice.

2. Construct a graph showing how an animal's performance depends on the number of trials or the amount of practice.

3. Identify the data that support the statement that the time required to perform an act will in general, be shortened after a number of trials.

4. Construct answers to questions about information presented in the graph.

e) Identifying and naming locations on the number line with decimal names. Applying a rule for adding and subtracting decimal numbers no smaller than tenths.

Objectives:

1. Name and identify decimal locations on the number line, using units, tenths.

2. Apply a rule for adding and subtracting decimal numbers (tenths).

3., Apply a rule for measuring length to the nearest 0.1 centimeter, volume to the nearest 0.1 milliliter, time to the nearest 0.1 milliliter, time to the nearest 0.1 second and weight to the nearest 0.1 arbitrary unit.

f) Demonstrating tests of predictions formulated by the child from graphs he has constructed.

Objectives:

1. Name the decimal (tenth) and large number (to 1000) coordinates of points on a graph with labeled axes.

2. Apply a rule that the manipulated variable is plotted along the horizontal or x-axis and that responding variable, along the vertical or y-axis.

3. Construct a graph, using number pairs that are decimals (tenths) and /or large numbers(to 1000) from data that he collected in investigations with two related variables.

4. Construct predictions, using a graph.

5. Demonstrate tests of his predictions based on graphs.

g) Identifying and constructing pictures of the transverse, slant, and longitudinal sections of various common three dimensional objects. Constructing inferences about the geometric shape of solids from the transverse, slant and longitudinal sections of various common three-dimensional solids.

Objectives:

1. Identify the plane, the longitudinal, and the slant section of a solid object.

2. Construct inferences about the plane shapes of transverse, longitudinal, and slant sections, given a solid object and the angle of the cut.

3. Construct inferences about the geometric shape of a solid object based on observations of its transverse and longitudinal sections.

h) Constructing and demonstrating the use of a tabular or punch-card record of observed chemical or physical changes.

1. Construct a record of observed chemical or physical changes, using a table or punch card.

2. Identify "unknown" materials by comparing observations of chemical or physical changes in these materials with previously recorded data.

i) Demonstrating the use of a punch card system of classification that uniquely identifies each object in a collection of objects.

Objectives:

1. Distinguish between minerals having metallic and non-metalic luster.

2. Demonstrate how to compare the hardness of minerals using a scratch test with copper (or a penny) and with glass.

3. Identify classification categories for a given mineral from observations of its hardness, its color.

4. Identify an unknown mineral using a punch-card information storage system that is provided.

j) Constructing a testable inference made by the child, about conductors and non-conductors.

Objectives:

1. Construct an inference based on an hypothesis about conductors and non-conductors.

2. Identify whether or not an observation supports a stated hypothesis, or an inference based on an hypothesis about conductors and non-conductors.

k) Distinguishing between statements that are hypothesis and those that are not. Constructing an hypothesis from a set of observations or statements.

Objectives:

1. Distinguish between statements that are hypothesis and those that are not.

2. Distinguish between obervations that support an hypothesis and those that do not.

3. Construct an hypothesis from a given set of observations.

l) Distinguishing between operational and nonoperational definitions related to electrical circuits. Demonstrating the use of an operational definition to construct a simple electrical circuit.

Objectives:

1. Identify an object, a situation, or an event which is related to simple electric circuits and is described by an operational definition.

2. Distinguish between an operational and a nonoperational definition of an object, a situation, or an event related to simple electrical circuits.

3. Construct a simple electric circuit from an operational definition.

m) Analysis of mixtures - distinguishing between two categories of objects on the basis of description given in one or more operational definitions. Demonstrating the use of an operational defintion to identify a procedure for separating a mixture into its components.

Objectives:

1. Identify the unkown components of mixtures by comparing students own observation of their physical and chemical properties with previously recorded data about them.

2. Distinguish between mixtures that are solutions and those that are not using an operational definition.

3. Demonstrate a procedure for separating a mixture into its components, using an operational definition.

n) Measurement of angles. Demonstrating a procedure for finding the measure of an angle with a protractor.

Objective:

1. Demonstrate how to measure given angles with a protractor.

2. Identify an angle of incidence and an angle of reflection when light is reflected in a mirror.

o) Precision in measurement. Demonstrating procedures for finding the median and range of a set of measurements. Identifying which of two sets of measurements is more precise, given both of their ranges.

Objectives:

1. Demonstrate a procedure for finding the median of a set of measurements.
2. Demonstrate a procedure for finding the range of a set of measurements.
3. Identify which of two sets of measurements is more precise, given both of their ranges.
4.. Identify the median as a representative number for a set of measurements.

p) Growth of mold on bread. Identifying and naming the variables held constant, the manipulated variable, and the responding variable in an investigation of the growth of mold on bread.

Objectives:

1. Identify the variables held constant and the manipulated variable from the description of a test in which mold is grown.
2. Identify the responding variable from the description of a test in which mold is grown.
3. Describe the qualitative observations that differentiate between growth responses of mold to manipulations of an environmental factor.

q) Loss of moisture from potatoes. Identifying and naming the variables held constant, the manipulated variable, and the responding variable in an investigation of loss of moisture from potatoes.

Objectives:

1. Identify the variables held constant and the manipulated variable from the description of a test in which moisture

evaporates from fruits or vegetables.

2. Identify the responding variable from the description of a test in which moisture evaporates from fruits or vegetables.

3. Describe data in response to questions about the moisture loss from evaporation in fruits and vegetables.

r) Force and motion - constructing a force diagram to illustrate that an unbalanced force is acting on a body that is changing speed.

Objectives:

1. Construct a force diagram to illustrate that an unbalanced force is acting on a body that is changing speed.

2. Construct a force diagram to illustrate that only balanced forces are acting on a body that is at rest.

3. Demonstrate that the greater the unbalanced force acting on a body, the greater the acceleration.

s) A unit of force - applying a rule to measure an unknown force and express the magnitude of the force in newtons. Constructing a calibration of a spring scale from the elongation of a spring when objects of known weights are attached to the spring.

Objectives:

1. Construct a calibration of a spring scale by measuring the elongation of the spring when objects of known weights are attached to the end of it.

2. Apply a rule to measure the unknown force, and express the measurement in the standard metric unit of force, the newton.

t) Rotations and linear speed. Applying a rule which relates the circumference of a circle to its diameter. Applying a rule relating linear speed, angular speed, and the circumference of a wheel in situations where two of the three dimensions are given and the third is desired.

Objectives:

1. Apply a rule for finding the distance a wheel rolls given the circumference of the wheel and the number of rotations it makes.

2. Apply a rule for finding the linear speed of a rolling wheel given its angular speed and its circumference or diameter.

3. State and apply a rule relating the circumference and the diameter of a circle.

u) Interpreting the field of vision - describing how the field of vision (the area) depends upon the distance of the field from the viewer.

Objectives:

1. Describe how the field of vision (the area) depends on the distance of the field from the viewer.

2. Construct a graph to show the relationship between the field of vision and the distance of the field from the viewer.

3. Construct predictions from a graph of the field of vision and the distance of the field from the viewer.

v) Living things are composed of cells. Construct representations of microscopic observations. Constructing an observational definition of an object in descriptive terms.

Objectives:

1. Construct representations of microscopic observations.

2. Construct an operational definition of an object in descriptive terms.

w) Large numbers - demonstrating a procedure for naming multiples of ten with powers of ten. Demonstrating a procedure for naming natural numbers such as 300 or 5,000 in scientific natation.

Objectives:

1. Identify and construct the representation of some natural numbers in two ways; as a product of two or more like factors, such as

$$10{,}000 = 10 \text{x} 10 \text{x} 10 \text{x} 10$$

and as a power of another natural number, such as

$$10{,}000 \ 10^4$$

2. Identify and name large natural numbers in the scientific notation; for example, "three million" is the numeral $3 \text{ X } 10^6$

SOURCES

Electronics Kits which may be purchased for about $5.00 at the local Radio Shack or Hobby Shops. Science fair kits related to electricity.

Moisture Detector Relay Kit
Electronic Organ Kit
Wireless Transmiting Station
2 Way Code Oscillator Kit for morse code
Fire Alarm Kit
Electronic Metronome
Photo Nite Lite Kit.
Two Transistor Radio Kit
One tube DC Radio Kit.
Mono Amplifier Kit
Intercom Kit
Burgular Alarm Kit
Solar Cell Radio Kit
Extension Speaker Kit
Crystal AM Code Key kit

There are many more interesting kits in the areas of electricity and electronics which may be purchased by those with a particular interest.

Most hobby shops and local discount stores carry mode's of animals, the cell, the human body, and parts of the body such as the eye, ear, brain etc. which can easily be made by those interested. Model cars.

Bibliography

Science-A Process Approach Part E
By American Association for the Advancement of Science
1968 Xerox Corporation

Science-A Process Approach.Commentary for Teachers 1970
AAAS Xerox Corporation

Education of the Intellectually Gifted
Milton J. Gold 1965
Charles E. Merrill Books inc. Columbus Ohio

Curriculum Planning for the Gifted
Fliegler Louis A. - Prentice Hall, 1961
Englewood Cliffs, N. J.

(Science and Children - National Science Teachers
Association)

Teaching The Gifted Child
James J. Gallagher, Allyn and Bacon Inc., 1965

CHAPTER IV

MATHEMATICS

Math Utilized in Unit:

MEAUSREMENT

- read length and width
- symbol for feet, inches
- abbreviation for yard, square, foot, cubic
- symbol for by
- conversion of cubic yards from square feet.

GEOMETRY

- recognize shapes of polygons
    - rectangles
    - triangle
- compute area, perimeter
- lineal foot meaning
- using diagonals in rectangle to square foundation
- recognizing other angles.

RATIO

ADDITION

SUBTRACTION

MULTIPLICATION

DIVISION

ESTIMATION

SCALE
- drawing
- reading
- converting inches to represent feet on blueprint

PERCENTAGE
- computation....interest, principal, time

FRACTIONS
- multiplication of mixed numbers

MONEY
- meaning of symbol@
- obtaining total costs
- reading money notation

PROBLEM SOLVING

HOME CONSTRUCTION

Objective: To discover the use of mathematics in the construction of a home.

Mrs. A. has property she bought 15 years ago and has decided to build a home. The lot, located in the town of North Providence, is 80' wide X 100' deep.

Certain specifications, before building must be met. A new house must have a 25' frontage from the street, and must be within 6' of boundaries on all other sides.

Mrs. A. obtained a construction mortgage from a local bank. The amount was $13,200 at an interest rate of 8½% for 20 years. This was to be paid in 3 equal amounts (installments) to the contractor. Interest was computed on the first installment which was 2/3 of the amount. The last installment had the final computation which would remain constant throughout the term of the loan.

The contractor hired blueprinted a house plan whose measurements were 42'X 26' with a 5" pitch to the roof. Since the contractor told Mrs. A. it would cost approximately $20 per square foot for the house, she gave the contractor $10,000 as partial payment.

Later Mr. B. sub-let the foundation laying to another man. His costs are $13.00 per cubic yard. Labor costs are $3.00 per lineal foot. Mr. B. told the foundation man that the garage door measurements would be 8' X 7', a door leading to the back yard....3'X 7' and 3 windows 2'X 3'. The foundation man later told the contractor that if the bill was paid within 10 days $.50 per cubic yard would be deducted.

Objective: Given the specifications and the use of a blueprint the student will be able to compute area, perimeter, and determine scale of blueprint by ratio.

Activities:

1. Discuss: What is a surveyor? What does he do? What role would he play in the construction of a house? Why would the knowledge of mathematics be important in his work? What specific knowledge would he have to have?

2. Computation: Compute area of lot. Compute area of house. Does house fit on lot?

Reference: Addison Wesley: Elementary School Mathematics; Book 4 pp. 2,3,8-11,18, 166.
Houghton Mifflin: Modern School Mathematics Book 5
Chapters 3 and 9

3. Determine perimeter of house by observing floor plan and utilizing specification. Compute these.

Reference: Addison Wesley: Book 4 Chapter 1
Houghton Mifflin: Chapter 3

4. Compute perimeter of individual rooms using floor plan.

5. Discuss: ratio. List ways in which ratio is used in daily use. How is it related to scale drawing? What does similiarity mean? Students may wish to write original ratio problems and exchange these with class for further computation.

Reference: Houghton Mifflin: pp 288-289 (Teacher's edition) 286-287.

6. Using floor plan blueprint, compute scale to determine ratio of inches to feet.

7. After computing perimeter of house, student can compute cost of foundation. (Use formula below)
   A. Determine perimeter. Multiply by height of foundation.
   B. Subtract garage door size, door sizes, and window sizes from answer in A.

C. Convert answer into cubic yards.

D. Cost of concrete per cubic yard times answer obtained in C.

E. Compute labor costs by multiplying perimeter by cost of labor per lineal foot.

Additional problems: What would be total cost if payment is made within ten days? (Refer to information in brief).

8. Discuss square, rectangle. How can one tell if sides are equal?

9. Invite a contractor to speak to class. (1) Ask him to discuss the use of a square in his work, (2) how does he square a foundation on the job? What knowledge of mathematics does a contractor need in his work?

10. Define the word sill. Check the dictionary for its usage when pertaining to construction.

11. Solve a problem. A contractor must buy the sill. Sills are purchased in 2 foot lengths.....10', 12', up to 20' If you know the perimeter of a house, what lengths would you purchase. There should be no wastage as sills cost $.12 a sq. ft. Compute the cost of these sills.

12. Make up an invoice of materials you would need to construct a home. Obtain a newspaper with construction materials and costs. Contractors receive a 5% discount on all purchases. Compute cost.

13. Ask a contractor to define certain terms: lolly column, center beams, include these in your invoice. Deduct these costs from the $10,000 + 1/3 of $13,000.

14. Ask a contractor to discuss how he computes the beams he must purchase for the pitched roof.

Reference: Practical Builders...a magazine listing all specification in building and computed results.

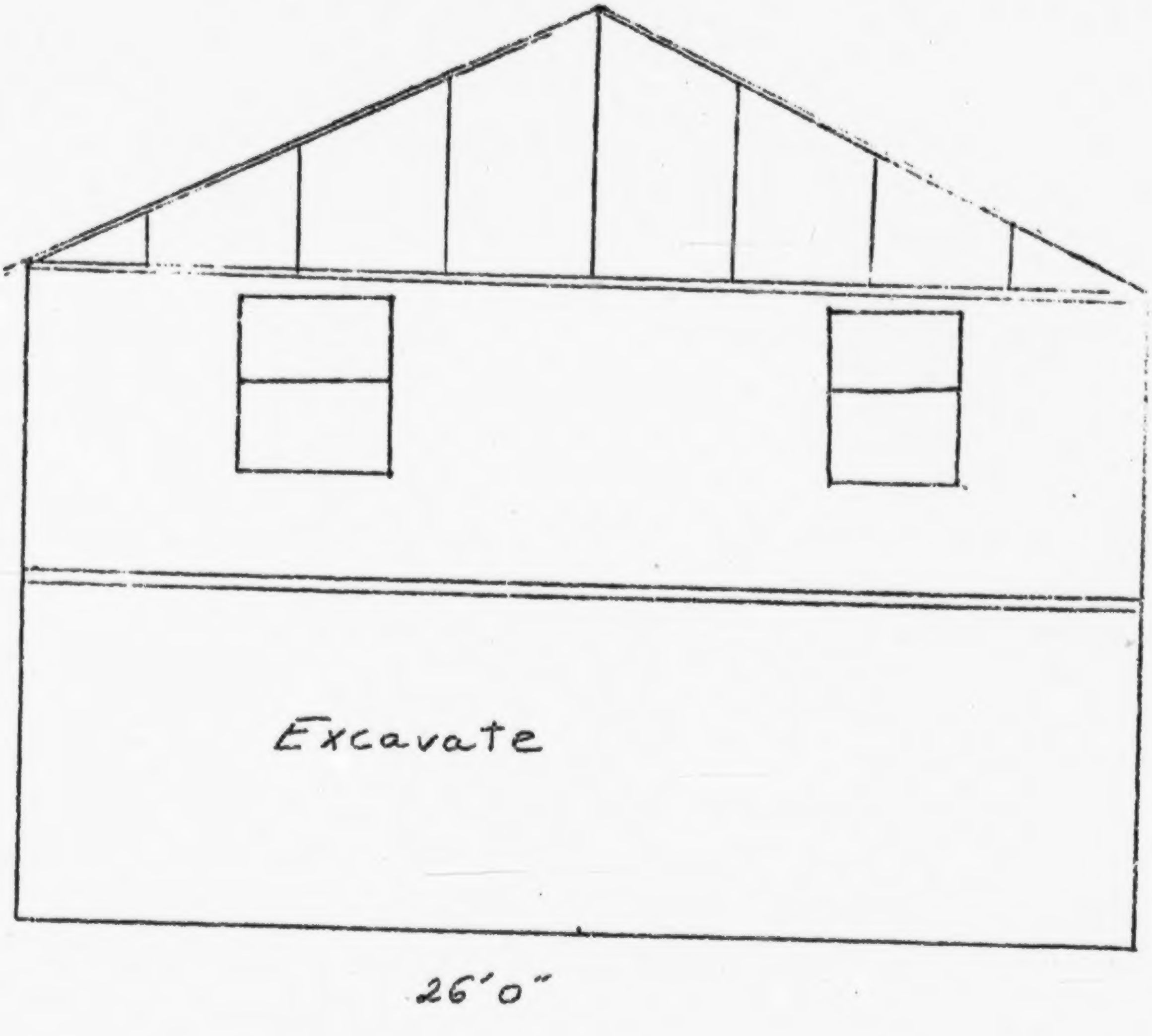
15. Discuss job of an electrician or invite one to speak to the class. Ask him to help you compute the length of wire to be used for electrical heat located in ceiling of new house.

16. Compute the total cost of the mortgage obtained.

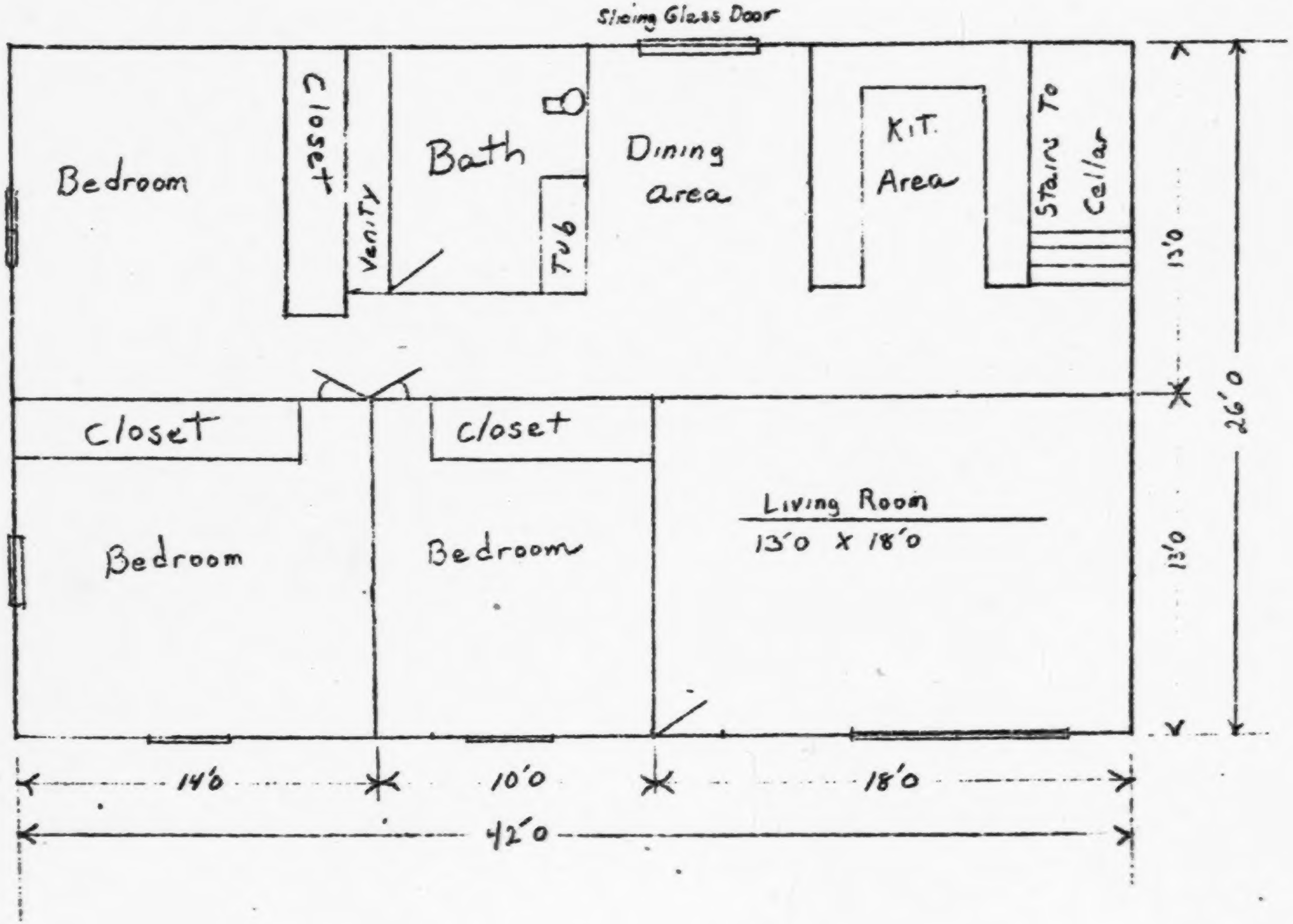
Reference: Houghton Mifflin: Modern School Mathematics, 1970, Course 1 Chapter 13.

17. Using all your figures estimate cost of constructing this house. Was the contractor correct when he gave earlier estimate of $20 per sq. ft.

Side Elevation


Excavate
26'0"

Floor Plan


Sliding Glass Door
Bedroom
Closet
Vanity
Bath
Tub
Dining area
KIT. Area
Stairs To Cellar
Closet
Closet
Bedroom
Bedroom
Living Room
13'0 X 18'0
13'0
13'0
26'0
14'0
10'0
18'0
42'0

Extended Activities

1. Make a scale drawing of your school; your home; or your classroom.

2. Make a model of your scale drawing using any form of art media.

3. Obtain other types of blueprints. Learn to read them.

4. Learn to use a square. Write original problems that utilize the square.

5. Select one room you choose to decorate. Figure costs of each item. Use the newspaper or magazines to help you determine costs. Make a diorama of your completed room.

6. Invite a banker to speak to your class about various types of savings, and loans. Ask him to explain interest rates, dividends compounded annually and other banking terms.

7. Research construction of buildings of Ancient Rome or Greece. Report findings to class.

8. Select a famous building of the world. Research this. Pretend you are in charge of constructing this building. What problems would you have to solve: labor, materials, availability of materials, etc. Make a scale drawing of building. Using your scale, construct the building of any art material.

9. Pretend you are a contractor in the year 2500. Build a model from any of the following:
   School
   Home
   Houseboat
   Trailer
   Automobile
   Apartment House
   Shopping Complex
   Skyscraper
   any other?

Plan from a blueprint. Report use of any new materials you might use in the construction of the above.

10. Research the topic: Architecture. Select any area about architecture you wish to study. Report to class.

11. Make model of early Rhode Island settlements.

12. Select an area of geography you have studied. Construct a model of home or city.

Resource Material:

Benenson, Lawrence, How a House is Built; Criterion Books, New York, 1964.

Moore, Lamont: The First Book of Architecture, Franklin Watts, Inc., New York.

World Book Encylopedia, Book A Architecture, 1969, pp. 567-592.

World Book, 1969, Book B Building Construction, pp 573-576.

A TRIP TO NIAGARA FALLS

Mr. and Mrs. Smith visited their cousin last weekend in Buffalo, New York. While visiting they wanted to visit Niagara Falls, one of the great American spectacles.

The trip began Friday at 2:30 P.M. and ended at 10:35 P.M. Mr Smith filled his gasoline tank twice, once in Providence and once on the New York Thru Way. His tank holds 24 gallons. They traveled on the Massachusetts Turnpike to the New York Thru Way to Buffalo.

Saturday morning, Mr. and Mrs. Smith and their young cousin visited Niagara Falls. Upon arrival they noted the following on a phamplet:

> Niagara Falls is located in the Niagara River. This river connects Lake Erie and Lake Ontario. All the Great Lakes except Lake Ontario empty into the 35 mile long Niagara River. The river flows toward Lake Ontario. The river divides just above the falls. It passes around Grand Island, an island about 6 miles wide; becomes a shallow stream then separates again at Goat Island and plunges over the falls. There are 2 large falls. The U. S, or American Falls, is about 180 feet high and about 1,400 feet wide. The Canadian Falls or Horseshoe Falls is 158 feet high and 2,950 feet wide. Water plunges over the falls at a rate of about 379,000 tons of water per minute. There is a danger of the falls ending because of erosion. A spot located behind the falls called the Cave of The Winds has been closed to the viewing public because scientists who have been closely observing the falls found large cracks in the rocks. There have been several rock slides wearing away the falls. The last one occurred in 1954. One may view the falls several ways. For twenty five cents per person, one may ride the elevator to the top of the observation deck and view both falls or

may ride to the land at the foot of the falls. One may walk or ride across Rainbow Bridge to the Canadian side of the falls. Entrance to Canada and return to U. S. costs 30 cents for the automobile and driver and ten cents for each additional passenger. One may view the falls from the boat, Maid of The Mist, for a fee of one dollar per person, or the falls from Goat Island on the United States side. The falls should be viewed from both the Unites States and from Canada.

Sunday Mr. and Mrs. Smith drove to Lockport to view the beginning of the Erie Canal which passes very close by to their cousin's house. The Erie Canal, now called the N. Y. State Barge Canal, is man made. In earlier times it was a principal sourse of travel between Albany and Buffalo. It was not unusual to see small passenger ships carrying both passengers and freight up and down the canal. A young boy's job was to guide the animals towing the barge and to warn passengers seated atop the flat top of the boat's cabin of low bridges which were built across the canal for easy access to the other side,

Today the canal is still used, primarily for pleasure craft and for barges carrying goods up and down streams.

Sunday evening Mrs. Smith flew back to Providence while Mr. Smith remained in Buffalo, to later return home to Providence by automobile. Mrs. Smith left Buffalo at 10:30 P.M. and arrived home at Green Airport at 12:05 A.M.

Activities

1. Read a road map of the area Mr. and Mrs. Smith traveled from Providence to Buffalo to Niagara Falls, to Lockport.

2. Compute the distance from Providence to Buffalo.

3. Discuss:
   What region would they pass through?
   What mountains would they see?
   What major cities would they by-pass?
   Of what importance are these cities?
   What river would they see?
   Of what larger river is it a tributary?

4. If the odometer on the car read 22,422 when they left Providence, what would be the reading when they arrived in Buffalo? What would it read when Mr. Smith returned to Providence?

5. Measure and compute the distance of the Massachusetts Turnpike to New York. Compute the toll of the New York Thru Way from the Connecticut line to Buffalo.

6. Research the topic the Erie Canal.

7. Learn the song the Erie Canal.

8. Compare the height of Niagara Falls with other Falls in the United States. Use the Addison Wesley Math book 5.

9. Water plunges over the falls at 379,000 tons per minute. Compute the amount per second. Convert the amount of water per minute into cubic feet,

10. Geologist feel that 25,000 years ago, the Falls stood at the shores of Lake Ontario. If the falls recess at about 5 feet per year,where will the falls be located in the year 2000?

11. Compute the gasoline expenses for the trip.

Providence 37¢ a gallon
New York Thruway 46¢ a gallon
Buffalo 44¢ a gallon

12. Ships may travel the Great Lakes to the Atlantic Ocean. Trace the route of a ship from Duluth, Minnesota to New York Harbor. What Lakes would it pass through, locks etc? What is the total distance?

13. A by pass of the Falls and rapids of Niagara is the Welland Canal. Research this as a topic.

Investigate:

How long? When built? Why was this area chosen to make the canal?

14. The first missionary to see the great falls at Niagara was a Father Hennepin. Pretend you are he. Write an account of what the falls may look like.

15. Mrs. Smith flew to Providence from Buffalo. The trip cost $8.89 and tax is $3.11. What per cent of tax did she pay?

16. Learn to read an airplane schedule. Note flight numbers. Why are some numbers even and some odd?

17. If Mrs. Smith had wanted to fly from Providence to Buffalo,what times could she leave? When would she arrive? Use the time schedule from an airline in your area.

18. Souvenir purchases,2 at $1.69 and tax = $1.81.

What is tax of each?
What percent of tax is paid?

19. Camera equipment 4 rolls of film @ 69¢. Two boxes flash cubes $1.39. Cost____.

Remedial Cost to Taxpayers on Study to Date.

To prevent total erosion of the Falls of Niagara the United States in its annual budget has funded money to the Corps of Engineers to study this problem and to try to resolve it. What the cost is to the taxpayer thus far follows:

FISCAL YEAR	ALLOWANCES
1966	$40,000
1967	$50,000
1968	$100,000
1969	$245,000
1970	$540,000
1971	$145,000
1972	$180,000

Activities

1. Compute the cost to 1971.
2. Compute the cost to 1972.
3. What percentage of total money has been funded for each year?
4. Make a bar graph showing the taxpayers costs.

EXPENSE ACCOUNT

Mr and Mrs. Smith carried $150.00 with them in cash. They thought they would spend less than this amount. Determine if they are correct.

Estimated

I. Gasoline Expenses

Prov. Fill up	$10.00
N. Y. thruway	$25.00 (both ways)
Buffalo	$15.00 (fill up)

II. Tolls
$20.00

III. Admissions to falls

IV. Ticket
$42.00

V. Souvenires
$10.00

VI. Misc.
$10.00

Includes camera equipment

Total
$150.00

Total

Bibliography

Encyclopedias

World Book
Comptons

Newspaper
Niagara Gazette, Sunday June 8, 1971.

THE TURTLE

David Bushnell was a Connecticut Yankee with a great deal of ingenuity and determination. As a young man in the village of Saybrook, Connecticut he enrolled at Yale in 1771. As a freshman one of his professors said gunpowder wouldn't explode under water. David doubted this and decided to experiment to prove this was incorrect. Because of his determination he proved that gunpowder exploding under water was far more harmful than explosion on land.

Since the colonies were having difficulties with Britain and English warships were blockading American harbors, preventing normal trade, David Bushnell went to work to design some kind of underwater boat that would carry a bomb to a warship and explode. He began to build his craft on the banks of the Connecticut River in Saybrook in the year 1775.

He called his craft the Turtle because it resembled two turtle shells standing on end and sealed together. The hull of the ship was oak planking, caulked, tarred, and bound with iron bands. It was 7½ feet long, 8 feet deep and 4 feet wide just large enough for a seated man who had to handle all controls. Nine hundred pounds of lead on the boat's bottom helped keep her low in the water. Additional weight was needed to fully submerge the craft. The method used then and today was to let water flow into a tank until the craft was heavy enough to sink. The Turtle had one tank, while modern submarines have two large ones on either side of the hull.

The operator of the Turtle had to work two hand pumps to empty the tank to bring the craft up to the surface.

The Turtle's top speed was one mile per hour and could only remain submerged for 30 minutes before the air ran out.

David Bushnell's craft was put to use one August night in 1776 in New York Harbor. Ezra Lee volunteered to test this craft and drive 130 pounds of gunpowder into a British ship. He failed his mission yet the Turtle proved that a craft could approach enemy craft fully submerged and not be detected.

In many ways, Bushnell's submarine had set the pattern for modern submarines. He was called the Father of the Submarine.

Math Objectives:

1. The student will be able to compute the volume of three dimensional symetrical solids.
2 Given the weight of a solid and its volume,the student will be able to compute the density of the solid.
3. The student will be able to state, explain and use Archimedes Principle in simple calculations.
4. The student will be able to do simple time, speed, distance calculations.
5. The student will be able to effect conversion of distance units from one notation to another.

USE OF THE MATERIAL IN THIS UNIT

The material and suggested activities in this unit are designed to give the teacher the opportunity to introduce the above mentioned concepts to her students as well as to sharpen their skills in the basic mathematical operations,using as a format, a topic which it is hoped will be more interesting than a page of numbered problems. It is left to the teacher to expand on the suggested activities, emphasize some areas, and delete others according to the needs of the students involved. The object of this unit,as is the object of the other math units in this curriculum,is to provide a framework within which math can be taught in an interesting and relevent manner to students, who even more than the average,tire rapidly of pointless (in their eyes) repetition.

THE TRITON

When the Triton was launched, the Unites States Navy had produced the largest and most powerful submarine. It is classified as a radar picket. Her job is to lie off enemy waters and give early warning of approaching ships or aircraft.

Among nuclear powered submarines, the Triton is a giant. It is 447½ feet in length with a 37 foot beam. She displaces 8,000 tons, fully submerged. She carries a crew of 184 officers and men.

In 1960, she was ordered to circumnavigate the globe without surfacing. She was to follow the course followed by Ferdinand Magellan in 1519.

The Triton submerged off Long Island. Her first point was Saint Paul Rock, 55 miles north of the equator in the mid-Atlantic. This was to be the true starting point of the world cruise. It rounded South America's Cape Horn and entered the Pacific Ocean. She traveled to Guam and from there sailed to Magellan Bay in the Philippines, then south through Madagaskar Strait. Later she rounded South Africa's Cape of Good Hope and back to Saint Paul Rock. It had taken her 84 days while Magellan's trip had required four years.

Activities:

Your class is in charge of planning a raid by the Turtle on a vessel at anchor 4 miles down river from where you are located. If this venture is to succeed, careful planning is required.
You must know:

A. How long it will take to reach the destination and return; and when and where you must surface to replentish the air supply.

B. If 1/3 of the Turtle is above the surface of the water when she is surfaced, how much water must be pumped into her tanks to make her just submerge?

Teacher: A weight of water equal to the weight of the surfaced section of the submarine:
Review Archimedes principle. Assume that the submarine weighs 27,000 lbs without ballast.

E. How early must you leave if you wish to attack at midnight?

F. If you wish to be a minimum of 3600 feet from the enemy ship when the bomb explodes, how long a fuse should you set if it burns at a rate of 1ft. per minute?

Comparison of the two submarines: Turtle and Triton.

A. How many times bigger is the Triton than the Turtle?
In Length?
In volume?

You have already calculated the volume of the Turtle. The Triton displaces 8000 tons of water submerged, which means that if you dropped her into a huge tub filled to the top with water 8000 tons of water would flow over the edge. What is the volume of that amount of water?

How much faster is the Triton than the Turtle?
Calculate the average speed of Magellan's ships and the Triton on their around the world voyage.

Activities:

1. View the filmstrip entitled Spanish Explorers Voyages of Magellan....Eyegate Series 60. Filmstrip # 60-b
What problems did Magellan encounter on his trip?
Why would the voyage take four years?

2. Obtain a world map. Trace the route of Magellan. You may also have to use a history book. Compute the distance of his trip.

3. Trace the voyage of the Triton. Compute the distance of this trip. How does the distance of this trip compare in miles with the trip of Magellan?

4. Convert the distance of the Triton's trip into nautical milc

5. Compute the number of miles the ship of Magellan sailed per day if the trip lasted four years.

6. Discuss why this trip would take this long.

7. Compute the average number of miles the Triton sailed if it took 84 days to complete the trip fully submerged. What other factors would account for its speed other than the fact that this submarine is nuclear powered.

8. Another sailor who circumnavigated the globe was a fictiona character, Captain Nemo in the book 20,000 Leagues Under the Sea by Jules Verne. Obtain the book from the school library and skim to find the distance traveled. What problems did the captain encounter. Compare his distance with those of the Triton and Magellan. Trace the route he took.

9. You may want to listen to the taped cassette of this book for more information. Bell and Howell Cassettes: Series 7001-7050. 7020 - 20,000 Leagues Under the Sea.

10. Discuss the word displaces What does the word mean in context?

11. Look in a science book for an experiment that has as its objective the displacement of water. Perform this experiment for your classmates.

12. Discuss the word submerged. What does the prefix sub mean? List as many words as you can using sub as a prefix. Define each word. Make up a crossword puzzle using these words and definitions.

13. Who was Archimedes? How has his theory been utilized in the building of submarines? Research and give an oral report on his life and scientific contribution.

Activities:

1. Read the brief description. Discuss the article.
2. Teacher reads the description of the failure of Lee in the book entitled The Real Book About Submarines by Samuel Epstein and Beryl Williams .. pp. 24-29.
3. Discuss: Would you have liked to be Ezra Lee in his mission? How would you feel if you had failed your mission? What would happened if your mission had been successful? Write another ending to the story.
4. Compute the volume of the Turtle.
5. Obtain a map of the Southern New England states. Compute the distance from Cranston, R. I. to Saybrook Connecticut.

   How long would it take to reach your destination if you were traveling by automobile at an average rate of 55 miles per hour?
6. Compute the number of miles if you left Providence Harbor and sailed to the mouth of the Connecticut River. Suppose your boat was traveling 15 miles per hour, how long would it take.

Extra Activities:

1. Trace the history of submarines from the time of Alexander the Great to our present nuclear submarines. Make a time line. Draw pictures of the submarines in each time period; include a short biographical sketch of each inventor.

2. Role playing. Write a skit. Ask a friend to play George Washington. You are David Bushnell convincing George Washington of the importance of your craft and its ability to travel under water.

3. You are a journalist for a patriotic newspaper during the Revolutionary War. Write a newspaper account of Ezra Lee's attempt to sink the British ship, HMS Eagle in New York Harbor.

4. Pretend you are a sailor on Magellan's ship. Write a diary of a week's events of your trip. Include your duties, what you have seen, etc.

5. Make a comparison of the Triton, and the Turtle. Compare the size of ship, weight, speed, crew.

6. Read the Jules Verne novel 20 Thousand Leagues Under the Sea. Illustrate the parts you like best.
Dress as Captain Nemo. Pantomime a part of the story that appeals to you.
List unusual foods eaten. Have you ever tasted these?
Draw pictures of the interior of his craft.
Make a diorama of something that interested you about this book.
Plot the course of the Triton as it circumnavigated the globe. Translate areas mentioned into degrees of latitude and longitude.

Bibliography

Warren, H.B. Harris; Dive! The Story of an Atomic Submarine. Harper & Row, New York, 1960.

Epstein, Samuel, Williams, Beryl; The Real Book about Submarines. Doubleday & Co, Inc. 1962.

Colby, C.B., Submarine, Coward-McCann, Inc., New York, 1953

Colby, C.B., Our Space Age Navy Coward-McCann, Inc., New York, 1962

Hamilton, Lee David, Let's Go Aboard an Atomic Submarine, C. P. Putnam's Sons, Inc. New York 1965.

Wyckoff, James, Who Really Invented the Submarine?, C. P. Putnam's Sons, Inc. 1965

Icenhower, J. B. The First Book of Submarines, Franklin Watts, New York, 1957.

Filmstrip

Spanish Explores Eyegate Series # 60; Voyages of Magellan #60-B

Cassettes

Bell & Howell, Series 7001-7050. 20,000 Leagues Under the Sea, Series 7020.

Adventure in Nature and Science, Atomic Submarines, Captain William R. Anderson, U.S.N. Children Press, Chicago, 1961

PACKET SHIPS

For any country to survive, it must trade its goods and obtain raw materials from other countries. Trade was carried on by ships and daring sea captains and their crews. These tramp ships went from port to port picking up whatever cargoes they could. There was only one thing wrong. Ships would sail at no set date.

This was a problem but was not too important during the War of 1812 for ships were raided by pirates or attacked by other British ships. However, after the War of 1812 this threat was removed. Yet these ships still did not travel on schedule.

Most regular traders on the Atlantic, running between England and America made one round trip in the spring and one in the fall, shunning the dangers of the wintertime passage. Sailing dates were announced but there were always delays. Ships would not sail until the holds were filled and the weather was fair.

Passengers waited sometimes impatiently, goods remained in the holds of ships for long periods of time, and merchants lost a great deal of money. Consequently no one was paid for any services.

According to the merchant's ethical code, the cardinal sin lay in the inability to deliver on promises. The merchant's goods has to be delivered on time. How were the merchants to solve their problems?

In 1817 some New York merchants joined forces and announced a regularly scheduled service for passengers, mail and freight between New York and Liverpool , England. These ships would sail rain or shine, full or empty, at a definite time once a month. And so on January 5, 1818 at 10a.m. the first regularly scheduled transatlantic liner had sailed from New York.

There was little difficulty in filling the holds of these packets bound for America. London, Liverpool, and Le Harve ports opened and valuable cargoes were shipped to America. Now the problem was to find cargo to ship to Europe that was equally profitable.

These Yankee shipowners found what they were looking for raw cotton from the South to be shipped to England and France. The cotton growers were used to shipping their crop directly but a few New York merchants had a better idea. Establish a cotton market in the North and ship the raw cotton to Europe from these northern ports.

Later other goods were shipped, for now the ships were sailing on schedule and the merchants were delivering their goods quickly and receiving money for their services.

The captain of a packet ship had to be an expert seaman and navigator for his ship had to withstand the icy winter gales and mountainous waves of the Atlantic. The captain demanded much from his crew which usually consisted of american youngsters eager to obey because they considered the job only a stepping stone to a command. Yet the crewmembers were paid about $15. a month. The captain's salary was ridiculous -- $30. a month. He could however bring his wife and family along free, he also got a percentage of passenger fares and a certain amount of space in the hold was alloted him for any cargo he might wish to sell and receive the profits. Sometimes a captain could make as much as $20,000 a year -- quite an amount for those days!

The passage east to Europe was called "downhill" because of the prevailing winds that blow from west to east. Back to America the passage was "uphill" for the ship had to buck the prevailing winds and battle the Gulf Stream current. Tacking all the way, she might log as much as 1000 miles more sailing "uphill" then down.

The early packet averaged less that 25 days to Europe and only 43 days back again. In 1823 the New York raced "downhill" to Liverpool in 15 days 16 hours, a record that was to stand for fourteen years.

America was a building, growing, expanding nation. The packet ships were a contributing factor in this growth and expansion.

OBJECTIVES:

1. The students will be able to solve time, speed, and distance problems using both statute and nautical miles.

2. The student will be able to use and graphically prove the pythagorean theorem in finding the hypotenuse of a right triangle.

MATH UTILIZED

1. Multiplication of whole numbers
2. Reading and writing large numbers
3. Multiplication using time
4. Computing distance
5. Comparing distances using subtraction.
6. Addition
7. Solving problems of transportation, wages
8. Distance, rate, time
9. Solving step problems
10. Fractions:
    1. Multiplication
    2. Reducing
    3. Ratio
    4. Converting fraction to decimal notation - to percentage

ACTIVITIES:

1. Discuss why ships would be important in the growth of a nation. Why would an extensive trade with other countries contribute to a nations economy, its growth?
2. Discuss some of the problems of the following:
   the merchants waiting to have their goods delivered
   the buyers of these goods
   the passengers waiting for the ship to sail
3. The first regularly scheculed transatlantic liner sailed for New York on January 5, 1818. How many years ago was this? Compute and then translate (convert) into the following:
   a. the number of months
   b. the number of weeks
   c. the number of hours (ship sailed at 10 a.m.)
   d. the number of minutes
   e. the number of seconds
4. Obtain a world map. Pretend you are a captain of a packet ship. Plot the safest course from New York to Liverpool, England. Plot the shortest course. Would the shortest course necessarily be the safest? Why not? Plot the course of a ship during the winter months. Plot the course during the fall months (hurricane season). Compare the distances of each.
5. Compute the distance between London, Liverpool and Le Harve, France.
6. Select three southern cotton markets along the Atlantic Coast. Determine the distance of each of these ports to New York.
7. Write original problems about the cost of transporting cotton bales from the southern states to New York. Include the cost factors of barge charges of x bales of cotton and the wages of captains carrying these bales.

8. Write original problems involved in distance, time and rate---sending this cotton to New York or shipping this cargo to London or Liverpool.

9. Read the paragraph that tells the number of sailing days back and forth to Europe. If a captain receives $30. per month, how much money would he receive for wages for the entire trip?

10. Packet ships usually carried a crew of 12 young men.
If a crew member receives $15. per month, what would be the wages for the same trip for each man.
Compute the total wages of the crew and captain. What percentage of the total wages does the captain receive? The crew? Write in fraction form then change to percentage.

Imagine that you are the captain of a packet ship sailing from New York to Liverpool. Your ship can carry 500 tons of cargo safely. You plan a winter crossing to Liverpool and a spring crossing back to New York with a stop in Copenhagem on the return trip. From past experinece you know your ship will average 10 knots east toward England and only 6 knots west to New York. In planning your voyage to and from England your problems are:

1. To pick the most favorable course in each direction to take advantage of wind, current and weather conditions. Remember that a sailing ship requires the crew to be able to climb the rigging in the worst weather encountered. Source: Encyclopedia-under current. Bowditch-"The American Practical Navigator".
2. Estimate the distance and sailing time in each direction. Give distance in statute and nautical miles.
3. Estimate the cost of wages for crew and captain.
4. If each of the crew consumes $1.00 worth of food per day, estimate this cost.
5. You own your own ship, however, fixed maintanence costs average $1000.00 per month. What are the fixed costs for the trip?
6. Estimate the total cost for the trip.
7. If a 15% profit above expenses is to be made, how much per ton must you charge for cargo in each direction?
8. You have a choice of cargo, coal or cotton, which would you choose and why? If coal weighs 10 times as much as cotton per cubic foot, how much more profitable is coal than cotton to carry.

Entering the channel for Liverpool Harbour you find that you are facing directly into a 10 knot wind. As a sailing ship cannot sail directly into a wind you must tack and follow a zig-zag course. You sail north at 6 knots for 20 minutes, east at 7 knots for 15 minutes, north at 6 knots for 13 minutes, east at 4 knots for 30 minutes and finally north at 3 knots for 25 minutes to anchor.

1. How far in actual distance did you sail?

2. If you had a motor that could propell you into the wind at 3 knots, how far would you travel to reach anchor and how much sooner would you get there?

3. Have the students plot this tacking course out graphically to work out the solution. Demonstrate that you get the same results easier by combining all courses in like directions and solving one triangle for the hypotenuse. Introduce the pythagorean theorem.

Plan a theoretical trip for the class, once the destination is chosen have the class listen to the radio weather report each day for the wind speed, halve reported to get approximate ship speed. Plot each days run, and use as a basis for time, speed distance problems.

On your trip from Liverpool to New York you find that if you repeatedly sail tacks alternating between northwest and southwest you can hold a speed through the water of 9 knots, however, the course you want to make good is due west. How fast are you moving in a westerly direction and what is your estimated sailing time?

BIBLIOGRAPHY

Chase, Mary Ellen, Sailing the Seven Seas; Houghton Mifflin, Boston, 1958

Coleman, Peter J., The Transformation of Rhode Island, 1790-1860 George Banta Company, Inc. Wisconsin

Lyon, Jane D. Clipper Ships-and Captains, American Heritage Publishing Company, Inc., New York

Rich, Louise Dickinson, The First Book of China Clippers, Franklin Watts, Inc.

JUST FOR FUN

Have you ever wondered how long it takes you to sharpen your pencil? Have you ever thought about the direction which you travel from your seat to the pencil sharpener?

Why not find out!

Activities:

1. Make your own "shoe" ruler. Obtain a piece of oak tag. Trace your shoe outline. This is your measurement. Start from your seat, mark a line to the pencil sharpener. Measure the distance using your shoe ruler. Each time you sharpen your pencil in one day-use your shoe ruler to measure the distance. Find the average "shoe" lengths for the day.

2. Compute the average shoe lengths for a week. Measure the distance 1 or 2 times per day.

3. Obtain a stop watch. Have a friend record your time to and from your seat to the pencil sharpener.

    Find the average
    Make a line graph showing the various recordings

4. Compute:
Using one distance and one time recording, determine the rate of speed you have walked.

5. Draw to scale a diagram of your classroom. Indicate your desk and chair and the pencil sharpener. Indicate other desks, chairs, tables, science lab, etc. (draw all to scale).

6. USING YOUR SCALE DIAGRAM

a. Show the path you would take if you walked in the direction of a triangle.

b. Walk, if you are able, in a circle. Ask your teacher if you might borrow masking tape. Using your desk as a starting point on the circumference of the circle,tape a circle by passing the pencil sharpener to your desk again. Mark another line from your desk to the sharpener. This should be your diameter. Measure your diameter using the shoe ruler. What is its length? Mark the center of the circle,can you measure the radius of your circle?

You may wish to do the activities solely,or with a friend. Keep all diagrams and charts you have made.

CHAPTER V

LEARNING CHARACTERISTICS OF GIFTED CHILDREN

LEARNING CHARACTERISTICS OF GIFTED CHILDREN

1. Unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; verbal behavior is characterized by "richness" of expression, elaboration and fluency. (National Education Association, 1960; Terman and Oden, 1947; Witty, 1955)

2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age). (Ward, 1961; Terman, 1925; Witty, 1958)

3. Quick mastery and recall of factual information (Goodhart and Schmidt, 1940; Terman and Oden, 1947; National Education Association, 1960)

4. Rapid insight into cause-effort relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick." (Carroll, 1940; Witty, 1958; Goodhart and Schmidt, 1940)

5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people and things. (Bristow, 1951; Carroll 1940; Ward, 1961)

6. Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film etc. than others (Witty, 1958; Carroll, 1940; National Education Association, 1960).

7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography or autobiography.